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ABSTRACT

This report evaluates a project that studied social, physical, and academic stress in the lives of students in an inner-city intermediate school and developed interventions to reduce that stress. Over 242 students, most of whom were from low-income families and almost all of whom were black, participated in the project. The following findings are reported: (1) a committee of parents, teachers, administrators, and project staff approved all research instruments and made recommendations for interventions; (2) the average frequency of stressor events did not change from year to year; (3) high internal consistency was established for four of the five subscales of a project-developed instrument to measure the perceived frequency of stressor events and anticipated reactions to those events; (4) student coping processes were positively related to achievement and the context in which the stressor events occurred, and external locus of control was related to low self-esteem and low achievement; (5) locus of control and the appraisal of stressor events were central to students' cognitions, feelings, and actions; and (6) effective interventions cannot be developed without the active and sustained support of school administration and teachers, many of whom believed that stressor events were beyond control. Case studies of five students are included. Statistical data are presented in six graphs. A list of 37 references is appended. Additional statistical data in 109 tables and six appendixes are contained in an accompanying volume. The tables illustrate the relationship of student perceptions of stress and locus of control to academic achievement and self-esteem. (FM)

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PROJECT ON ACADEMIC STRIVING

The Moderation of Stress in the Lives of the Students of an Urban Intermediate School: A Project to Coordinate Research and Environmental Intervention

FINAL REPORT TO THE WILLIAM T. GRANT FOUNDATION

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Project Director

and

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with

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May, 1988

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May, 1988

TABLE OF CONTENTS

ACKNOWLEDGMENTS ii

LIST OF TABLES v

LIST OF FIGURES xiv

PREFACE 1

CHAPTER

1. THE CONTINUING PROCESS OF PLANNING AND IMPLEMENTING INTERACTIVE RESEARCH AND INTERVENTIONS: CHRONICLE AND INTERPRETATION 3

Mary Ellen Fahs, with classroom observations and comments by Joseph C. Grannis

2. STATISTICAL ANALYSES OF STRESS AND SOCIAL SUPPORT IN THE SCHOOL AND THEIR RELATIONSHIP TO STUDENTS' DISTRESS, ACADEMIC ACHIEVEMENT, SELF-ESTEEM AND LOCUS OF CONTROL 55

Joseph C. Grannis

3. IN-DEPTH EXAMINATIONS OF STUDENTS' COPING PROCESSES, SELF-ESTEEM AND LOCUS OF CONTROL 109

Associations among students' perceptions of stress, coping styles, personal attributes and academic achievement 109

Mary Ellen Fahs

Multidimensional perceptions of control and area-specific self-esteem in relationship to academic achievement 134

Wanda L. Bethea

4. INDIVIDUAL CASES 159

Joseph C. Grannis

5. THE MEANING OF THE FINDINGS: PATTERNS AND INTERPRETATIONS 176

Joseph C. Grannis

REFERENCES 199

APPENDIXES (In Volume Two)

A. MATERIALS FOR SCHOOL-WIDE AND CLASSROOM INTERVENTIONS, 1984-1985 SCHOOL YEAR

B. MINUTES OF THE HUMAN RIGHTS COMMITTEE MEETINGS, 1984-1985 AND 1985-1986 SCHOOL YEARS

C. INSTRUMENTS AND RESEARCH PROTOCOLS USED IN 1984-1985 AND 1985-1986 SCHOOL YEARS

D. COOPERATIVE LEARNING WORKSHOP MATERIALS

E. MATERIALS FOR SCHOOL-WIDE AND CLASSROOM INTERVENTIONS, 1985-1986 SCHOOL YEAR

F. STUDENTS' COPING WITH ACADEMIC AND SOCIAL STRESS IN AN INNER-CITY MIDDLE SCHOOL. Paper presented in April, 1987 at the Annual Meeting of the American Educational Research Association, Washington, D.C.

LIST OF TABLES
(In Volume Two)

TABLE

1. Results of Original Factor Analysis of THIS
2. Results of Condensed Factor Analysis of THIS
3. Things that Happen In School (THIS) Condensed Factor Dimensions
4. Stressor Appraisal and Stressor Frequency Means and Standard Deviations for Cohort Students in Sixth, Seventh, and Eighth Grades
5. Stressor Appraisal and Stressor Frequency Correlations for Cohort Students in Sixth, Seventh, and Eighth Grades
5A. Stressor Appraisal and Stressor Frequency Correlations for Male Cohort Students in Sixth, Seventh, and Eighth Grades
5B. Stressor Appraisal and Stressor Frequency Correlations for Female Cohort Students in Sixth, Seventh, and Eighth Grades
6. Support Appraisal and Support Frequency Means and Standard Deviations for Cohort Students in Sixth, Seventh, and Eighth Grades
6A. Stressor and Support Appraisal and Frequency Means and Standard Deviations for Non-Project Students in Eighth Grade
7. Support Appraisal and Support Frequency Correlations for Cohort Students in Sixth, Seventh, and Eighth Grades
7A. Support Appraisal and Support Frequency Correlations for Male Cohort Students in Sixth, Seventh, and Eighth Grades
7B. Support Appraisal and Support Frequency Correlations for Female Cohort Students in Sixth, Seventh, & Eighth Grades
8. Distress Scale Factors
9. Means, Standard Deviations, and Intercorrelations of Distress and the Distress Factors: Depression Symptoms, Psychosomatic Symptoms, and Illness Symptoms
10. Intercorrelations of THIS Subscales and Distress for All Eighth Grade Groups

TABLE

11. Means and Standard Deviations of THIS Subscales and Distress For All Boys and Girls With High, Medium, and Low Stressor Appraisal Scores

12. Intercorrelations, of THIS Subscales and Distress for Boys and Girls with High, Medium, and Low Stressor Appraisal Scores

13. Intercorrelations of Stressor Dimension Scales and Distress Factors

14. Selected Intercorrelations of Support Dimension Scales, Distress Factors, and Stressor Frequency Dimensions

15. Means, Standard Deviations, and t-Values for Comparison of Scores for Cohort Boys and Girls on Selected Variables

16. Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for ALL Cohort Students

17. Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strictland Locus of Control, Stressor appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Boys

18. Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Girls

19. Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for All Cohort Students

20. Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Boys

21. Interrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Girls

TABLE

22. Means and Standard Deviations of Stressor Appraisal, Stressor Frequency, Locus of Control, and Distress for Students Above and Below the Locus of Control Median Scores

23. Correlations of Stressor Appraisal, Stressor Frequency, Locus of Control, and Distress for Students Above and Below the Locus of Control Median Scores

24. Results of Regression of Distress on Nowicki-Strickland Externality, Stressor Frequency, and Externality-Stressor Frequency, and Externality-Stressor Frequency Interaction

25. Stressor Frequency and Distress Means and Standard Deviations for Students Above and Below Median GPA

26. Intercorrelations of Stressor Frequency, Distress, and Midyear Grade Point Average for Students Whose GPA2P is Below Median

27. Intercorrelations of Stressor Frequency, Distress, and Midyear Grade Point Average for Students Whose GPA2P is Above Median

28. Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores - All Cohort Students

29. Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores - Boys

30. Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores - Girls

31. Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores - All Cohort Students

32. Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores - Boys

33. Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores - Girls

TABLE

34. Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores - All Cohort Students

35. Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores - Boys

36. Correlations of Connell Locus Control for Success and Failure Domain Scores with THIS Support Availability Item Scores - Girls

37. Means and Standard Deviations of Grade Point Averages for Eighth Grade Marking Periods, and of Reading and Mathematics Test Scores, for Cohort Students

38. Percentage of Students Receiving Zero to Four Passing Grades in Four Major Subjects at Eighth Grade Midyear and Final

39. Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for All Cohort Students

40. Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for Cohort Boys

41. Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for Cohort Girls

42. Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, All Cohort Students

43. Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, Cohort Boys

44. Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, Cohort Girls

45. Result of Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading

46. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, All Cohort Students

TABLE

47. Means Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, Cohort Boys

48. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, Cohort Girls

49. Results of Regression of Grade Point Average on THIS Predictor Subscales and Reading

50. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, All Cohort Students

51. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, Cohort Boys

52. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, Cohort Girls

53. Results of Regression of Grade Point Average on THIS Predictor Subscales and Mathematics

54. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, All

55. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, Boys

56. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, Girls

57. Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control

58. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with Low Externality

TABLE

59. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with High Externality

60. Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with Low Externality

61. Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with High Externality

62. Correlations among Regression Analysis Variables for Students with Low Externality Separately for Boys and Girls

63. Correlations Among Regression Analysis Variables for Students with High Externality Separately for Boys and Girls

64. Items Associated with Teacher Rating Scale Factors

65. Means and Standard Deviations of Teacher Rating Scales Scores for Positive Behavior and Negative Behavior, and of Other Scores, for Cohort Students in the TRS Sample

66. Correlations of Grade Point Average, Reading and Math Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior, All Cohort Students for Whom TRS Scores Available

67. Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior, Boys

68. Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior, Girls

69. Correlations of Connell Locus of Control for Failure Domain Scores, Hare Self-Esteem Domain Scores, and Stressor and Support Appraisal Scores with TRS Positive and Negative Behavior Scores, All Cohort Students for Whom TRS Scores Available

70. t-Tests of Differences between Male and Female Teachers' Behavior Ratings for Total Sample of Project Students Rated in 1984-85 (Pairs analysis: Cases with ratings by both male and female teachers)

TABLE

71. t-Tests of Differences between Male and Female Teachers' Behavior Ratings of Boys and Girls in Total Sample of Project Students in 1984-85

72. Correlations between Academic Coping Inventory Subscales and the Stressor Variables for the Whole Sample and for Boys and Girls Separately

73. Significant Correlations among Academic Coping Inventory Subscales and Hare Self-Esteem Scale Subscales and Nowicki-Strickland Externality of Control Scale for the Whole Sample and for Boys and Girls Separately

74. Means and Standard Deviations of Variables for Four Groups Defined by Gender and Reading Scores Above 6.7 and Equal to and Below 6.7

75. Correlations among Academic Coping Inventory Subscales, Retrospective Self-statements and Checklist Endorsement Statements for Whole sample and for Boys and Girls

76. List of Upsetting Situations From Interviews of Students in Spring, 1985

77. Percentages of Students Making Positive Coping Self-Statements in the Stressful Academic and Social Situations by Status Group

78. Means and Standard Deviations and Significant *t* values for Comparison of the Four Status Groups defined by High and Low Stressor Frequency and Mid-year Grade Point Average

79. Percentages of Students making Positive Appraisals in Stressful Academic and Social Situations by Status Group

80. Correlations between Students' Responses to the Academic Coping Inventory in 1985 and 1986

81. Means and Standard Deviations and Significant *t* Values for Comparison of Boys and Girls

82. Means and Standard Deviations and Significant *t* Values ($p<.05$) for Comparison of the Four Status Groups defined by High and Low Stressor Frequency and Mid-year Grade Point Average

83-90. [These Table Numbers not used]

TABLE

91. Correlations Between Three Perceived Dimensions of Control and Four Achievement Variables

92. Correlations Between Perceived Dimensions with Successful Outcomes of Control and Achievement Variables

93. Correlations Between Perceived Dimensions with Failure Outcomes of Control and Achievement Variables

94. Correlations Between Perceived Dimensions of Control Within the Social Domain in Relation to Achievement Variables

95. Correlations Between Perceived Dimensions of Control within the Cognitive Domain in Relation to Achievement Variables

96. Correlations Between Perceived Dimensions of Control Within the Physical Domain in Relation to Achievement Variables

97. Correlations Between Perceived Dimensions of Control within the General Domain in Relation to Achievement Variables

98. Correlations Between Connell's Relative Internality for Success and Failure with Achievement Variables

99. Correlations Between Bethea's Relative internality for Success within four Domains and Achievement

100. Correlations Between Dimensions and Successful Outcomes of Control within the Social Domain in Relation to Achievement

101. Correlations Between Dimensions and Failure Outcomes of Control within the Social Domain in Relation to Achievement

102. Correlations Between Dimensions and Successful Outcomes of Control within the Cognitive Domain in Relation to Achievement

103. Correlations Between Dimensions and Failure Outcomes of Control within the Cognitive Domain in Relation to Achievement

104. Correlations Between Defensive Externality and Congruency in Relation to Achievement

105. Correlations Between Defensive Externality within Four Domains and Achievement

TABLE

106. Correlations Between Congruency within Four Domains and Achievement

107. Correlations Between Three Perceived Dimensions of Control and Self-Esteem Variables

108. Correlations Between Defensive Externality and Congruency with Self-Esteem Variables

109. Correlations Between Achievement and Self-Esteem Variables

LIST OF FIGURES*

FIGURE

1. Regression of Distress on Stressor Frequency for Students with High and Low Nowicki-Strickland Scores 77

2. Regression of Grade Point Average on Reading Test Score for Boys with High and Low Stressor Appraisal Scores 94

3. Regression of Grade Point Average on Reading Test Score for Girls with High and Low Stressor Appraisal Scores 95

4. Regression of Grade Point Average on Math Test Score for Boys with High and Low Stressor Appraisal Scores 97

5. Regression of Grade Point Average on Math Test Score for Girls with High and Low Stressor Appraisal Scores 98

6. Scheme of Relationships Among Personal and School Factors Influencing Student Outcomes 185

* In Volume One

PREFACE

In recent years, a great deal of research and in-service training has focused on teachers' stress. Very little attention has been paid to the stress of students, except research on test anxiety and school phobia. There was clearly a need to explore in an intensive way students' experience of stressors in a school environment. Previous research had also pointed to early adolescence as a stage of life in which there is a critical combination of stressors, namely, major psychobiological and socio-emotional changes, demanding school transitions, and an increasing need for social acceptance by peers.

In June, 1982, The William T. Grant Foundation gave a one-year planning grant to The Public Education Association for refinement of the design of a project to coordinate research and environmental intervention on stress in the lives of students in an inner-city school. The foundation awarded a three-year grant to carry out the project in November, 1983.

The project was located in an intermediate school with a total enrollment of about 500 students, most of whom came from low-income families. Almost all of the students were American-born blacks. About half of the school staff and the project staff were also black. Over the course of the three and a half years of the project's research and intervention activities in the school, 242 students were officially enrolled in the project.

The Interim Report (Grannis & Fahs, 1985) documented the initiation and implementation of the interactive research and intervention activities and presented the research findings from the 1983-1984 school year with some reference to the preliminary findings in the previous pilot year.

This Final Report will describe the continuing interactive process of planning with school staff and parents for both the research activities and the interventions during the 1984-1985 and 1985-1986 school years as well as an analysis of research findings. Emphasis will be given to the trends and continuities of the findings over the four-year period of data collection in the school. The report will not attempt to include all of the material that the project has developed, either qualitative or quantitative. The authors filled some thirty journals with ethnographic entries, recorded numerous interviews of students, and carried out several hundred statistical analyses of instrument results and students' grades.

Ongoing research which has followed the last cohort of project students into their high school years will be presented in a later report. Practical recommendations for school reform will be developed from these findings with the input of educators and advocates.

CHAPTER ONE

THE CONTINUING PROCESS OF PLANNING AND IMPLEMENTING INTERACTIVE RESEARCH AND INTERVENTIONS: CHRONICLE AND INTERPRETATION

This part of the report will chronicle the project's activity as it interacted with events in the school and the school environment. The chronicle will be interspersed with interpretive comments and vignettes from the project's observations. The resulting narrative will furnish a context for our presentation of the quantitative findings of the research in Chapter Two. Names of school staff and students have been changed to protect confidentiality.

It will be remembered that the first full year of the project's work in the study school ended in some confusion with the announcement by the District Superintendent that the school would not reopen in the fall of 1984. Feedback to the teachers about the results of instrument administration during the 1983-1984 school year was nearly overwhelmed by the teachers' concern about the future of the school. Various parties, however, contrived a show of support for the school. The president of an Alumni Association that was otherwise never heard from and a couple of teachers who represented cliques in the school made statements in a public meeting, the officers of a Parents Association whose only active membership consisted of the officers obtained a hearing with the community superintendent, and the director of the Project on Academic Striving wrote a letter to the superintendent, all protesting the abrupt closing of the school. By the last day of school, no further steps had been taken by the district to close the school and it was assumed that the school would stay open. The project director agreed to give a workshop session on the project's findings and one of the intervention activities at the mandated staff development day prior to the opening of school in September.

Comment. External forces often entered into the generation of stress in the school. The district was itself under pressure to demonstrate adequate utilization of the school, in which the enrollment had been steadily declining; for demographic reasons, enrollment was soaring in the schools of an adjacent district and this district was looking for space in the district of the host school. Another factor was the superintendent's dismay with the regular poor performance of the school on city-wide tests and the disorganized school environment he encountered on his occasional visits to the school. His response was to propose the development of an alternative high school in the place of the intermediate school. The way in which all of this was done, however, on short notice and without consultation with the staff or parents of the school, was extremely upsetting to the school--or, more accurately, it mirrored and amplified the arbitrariness, lack of communication, and distrust that characterized the school environment itself. By a principle of congruence, this same anomie extended into the classrooms and other settings of the teachers' and students' everyday lives in the school. It would appear again at the district level at various later times during the project's stay in the school.

1984-1985 SCHOOL YEAR

Planning: Summer, 1984

During the summer, PAS staff made plans for the research and interventions to be carried out in the following year as well as the opening staff workshop. Plans were made to work with the seventh and eighth grades, which would contain the project students from the previous year as much as possible, and to add any new students in those grades who wished to join. The action role of the project staff would be 1) to help teachers implement Group Guidance sessions aimed at reducing school stress by establishing a Group Guidance Teacher Support Center in which meetings with the teachers and demonstration of appropriate materials could take place as well as assisting them in the classroom, 2) to counsel individual students referred for help, 3) to promote more within-grade and school-wide cooperation, and 4) to enhance project-parent relations by holding an open house.

To promote the working relationship between teachers and project staff and to enhance the competence of both in carrying out effective group activities, the project supported the participation of two project staff members and two key teachers in a workshop conducted by Maurice Elias and John Clabby at Rutgers University in mid-July.

In response to an appeal by the Principal during the summer, the President of PEA helped arrange for the inclusion of the study school in the Board of Education's School Improvement Project, provided that the principal and teachers would go through the appropriate steps, i.e. the request for inclusion by the school staff and the election of a representative school committee.

Opening of school, September, 1984

At the first faculty meeting of the year, project staff learned that there would be no sixth grade, five seventh grade classes (two of whose teachers had worked with the project), five eighth grade classes (two with teachers who had worked with the project) and one or two seventh grade gates classes. This reduction in the school population necessitated cuts of about 13 staff; as the children had not yet arrived, there was concern about whether further cuts would have to be made. At this point, none of the teachers knew their teaching schedules.

The workshop conducted by the project director took place the next day after lunch, and after all the staff had been to a mandated Board of Education workshop at another school in the district all morning. The findings about the students' perceptions of the most frequent stressful and support events were presented to the staff as well as a few correlations with grades and reading and math scores (Appendix A-1 and A-2); a group guidance activity was also demonstrated with video. There were many distractions during the workshop: The principal left and teachers kept being called out about their programs which made everyone anxious and concerned. Conditions were far from ideal for constructive exploration of ways to relieve student stress!

What also became apparent from these first few days just prior to the opening of school was that favoritism was evident in the assignment of teachers' programs which caused a lot of ill will among teachers, even those who had been on the project's Teacher Planning Team the previous year.

A Code of Conduct for students that had been drafted over the summer by an administrator was read to the faculty at the opening staff meeting. It evoked both support and skepticism, particularly an observation by one teacher that there was too much use of the public address system to say what students should not be doing, and too little presence of the administration in the halls. A lengthy discussion of the form and purpose of a Section Sheet for teachers to document student conduct and disciplinary incidents came to no resolution. In a subsequent meeting of the school cabinet, the project was able to suggest a more positive wording of the preamble and first item of the Code of Conduct (See Appendix A-3). It was to be given to the students in assembly on the opening day of school, the next week, but in fact was distributed very casually in official classes several weeks later. The stage was set for continuing confusion about who was responsible for order in the school.

Comment. The practices of the administration of the school added heavily to stress in the school and in the project. Teachers not knowing their schedules during the crucial days before the children arrived was very disruptive of their planning and security and undermined the workshop that the project had been asked to conduct. The administration announced a set of arrangements that faculty saw at once were unlikely to work: a division of functions, "advisory" vs. "punitive," between two deans on the one hand and two grade advisors on the other, all of these persons being part-time in their roles and part-time teaching classes, which over the course of the year would mean frequently that it was hard to determine who was responsible in a crisis at a given time; the eighth grade advisor being assigned to teach only seventh grade classes; teams for curriculum development that cut across the grades in a way that competed with them for time and leadership rather than complementing them; and substantially reduced teaching loads for a third of the faculty, putatively involving them in the running of the school, but shifting a disproportionate teaching load to the remaining teachers and raising questions about the basis on which the special assignments had been made. On one of the very first days of class, at one o'clock in the afternoon, it was announced that the election of officers for the Parents Association would be held that same night, and children were exhorted to get their parents to attend. Decisions appeared to be both politically motivated and out of touch with what the school needed. All of these actions contributed to a very low sense of impowerment and control, which left school staff, and project staff as well, more vulnerable to stressor events as they occurred.

Classroom interventions; Teacher Planning Team

The primary focus of early PAS staff meetings was discussion of how the project would work with the seventh and eighth grade classes, many of whose teachers would be new to the project. Strategies for reaching out to new teachers were discussed with a few teachers involved in the previous year. In the third week of school, fifteen teachers were invited to a lunch meeting in the project's newly created Academic Striving Resource Center; seven attended. The project director described the project and some of the initial findings and invited the teachers' insights as to the meaning of the data. The teachers present were then asked to make suggestions as to the issues that the project could help them with. The general consensus was that students needed help in making applications to high school and that, since the deadline was November 1st, this should be the focus of group guidance for the next month. The minutes of that meeting and a memo about the project (Appendix A-4) were circulated to all the seventh and eighth grade teachers prior to the next meeting. Because of conflicting lunch schedules not all the teachers were able to attend at the designated time. Between six and eight teachers did, however, attend the weekly meetings. Ways of helping students with high school applications, career and vocational possibilities continued to be a central focus; the project developed a number of worksheets to help with this activity (See Appendix A-5 and A-6) and staff members helped teachers present these activities in classrooms. Arrangements were also made with the teachers for PAS staff to visit classes to explain the project, distribute pencil cases to project participants and invite new students to join as well as to observe classes. The meetings were also used as a time for teachers to share other kinds of activities which they initiated for group guidance (See Appendix A-7 for an example of a teacher activity that was distributed by project staff to all teachers).

The issue of students' applications to high school brought the school system's expectations for the students into focus very early, as the following observation reveals:

> In the opening auditorium the first week of school, the importance of the students doing well was emphasized in this statement early in the session: "Seventh graders, the grades that go on your high school applications next October will be the grades you get

> this year, so you are preparing now for two years from now." The prospect of students not getting accepted at the high school of their choice, however, was emphasized in various subsequent remarks. Immediately following the above statement, the dean who was speaking made a "mother" remark that got more of a laugh from the students than he intended, and he then said, "Don't you want to go to the high school you've chosen?" A student called out "No!" and got an even bigger laugh. Later on a gym teacher declared, "Eighth graders, you might not get into the high school you choose if you fail gym because you don't bring the right gym clothes." The seventh grade advisor remarked, "Many of you have your heart set on a certain school, you have the ability, but you don't make it because of what [the principal] called `your foolishness.'" The second dean told the students, "Last year, a student had marks with an 84 average but didn't make the school of his choice because he had more than 120 latenesses." When the time came for the eighth grade advisor to announce that she would be "working with you along with your parents in making applications to high schools--Performing Arts, Music and Art, and other special high schools" (schools that rarely accepted students from this school), the students' attention had drifted to their own conversations.

A series of group guidance sessions were scheduled for the eighth graders in the cafeteria, to instruct them in how to fill out the high school application. No one present knew how to work the microphone system in the first two meetings, so there was mass confusion. In the next meeting, according to a teacher who was present, the students "did not seem to know what to do or to care," and the school guidance counselor admonished them that they were not going to get into good high schools anyway because they had been late too many times, had too many absences, and so forth. Leaving aside the guidance counselor's negative attitude, it must be appreciated that the job of shepherding the students' applications had been made much more complex bureaucratically by recent changes in the city system, and that the time allowed to prepare the applications had been reduced. In other words, the guidance counselor was stressed too.

The Directory of High Schools from which the students were to make their choices was extremely difficult to figure out, even for teachers and for the staff of the project. This alone, apart from the need to facilitate some discussion of the choices and their relevancy to different career possibilities, was what induced the project to create materials and discuss with teachers how they could conduct exercises and discussions in their regular subject classes and group guidance. The fact is, however, that even in the highest-track classes (see below on tracks), the time that was given to this was a mere fraction of what the issue required. We see here an instance of something that occurred repeatedly among school staff and indeed project staff, settling for what represented one's "best shot" under the circumstances, not what would actually do the job that needed to be done, but what could be rationalized in terms of the effort and resources that one had available without drastically departing from one's other commitments. Such an approach was not sufficient to evoke even a best-shot effort from many of the students themselves.

At the end of October, project staff began making plans with teachers for the administration of the Academic Environment Inventory in their classes beginning in mid-November. It was agreed that the instrument would be given to the entire class and that those students without permissions would be given anonymous code numbers. Plans also began for class discussions of the events which students found most stressful and supportive as a way of trying to improve the learning climate. In the middle of November, it was decided to meet in alternate weeks with the seventh and eighth grade teachers. From time to time in the meetings, teachers problems with/concerns about individual students were discussed, sometimes with the view to individual counseling by project staff. The project director also started talking about the possibility of having a workshop for all the school staff on Cooperative Learning.

Beginning at the end of November, after the responses to the Academic Environment Inventory had been tabulated for each class, project staff began the process of using the feedback to students to generate discussions about improving classroom learning climate. To facilitate this process, graphs were made for each class showing the responses on the frequency of both stressful and supportive events. (See Appendix A-8 for examples. Numbers to the left of each item indicated to staff the students' reactions to the events, i.e., how upset or good they made the students feel). The effectiveness of this activity varied in different classes but usually led to good discussions and often to interesting follow-up activities carried out by teachers and project staff. One such follow-up had the goal of discussing how to express anger in words instead of physically and how to express feelings, hopes and dreams. The AEI feedback also became the vehicle for helping one seventh grade class whose teacher had been on sick leave for most of the term and which had had a number of coverage teachers. Subsequent discussions clearly revealed that the class felt that nobody cared about them. One member of the Teacher Planning Team heard some of this discussion and made a big effort to show that she cared. She also asked the project staff to help her give a Christmas party for that class which was done.

During the spring semester of 1984-85, it was necessary to withdraw students from regular classrooms to complete project instruments: the Connell Academic Coping Inventory, the Nowicki-Strickland Scale of Internal-External Control, the Hare Self-Esteem Scale, and the Connell Locus of Control Scale. This was done by arrangement with various teachers, who took turns and made plans for the students remaining in their classes. Project staff decided that whenever possible some kind of constructive group activity should be conducted with the project students following the administration of each instrument. These activities typically took place with all participants seated in a circle and began with an exercise to evoke students' talking about some positive or mildly threatening subject. Frequently, and intentionally, the way the students were talking to one another was itself made into the focus of the meeting.

For example, on one occasion, the project students from a seventh grade teacher's class were seated in a circle after completing a coping instrument. No one responded to "tell about something successful you did this weekend," and the circle disintegrated into students talking excitedly and competitively with one another. The very problem in this class was its lack of group coherence. Project staff asked them to look around and think of the one word that best described the group at that time. The students quickly got involved with this and came up with words that touched on a lot of the dynamics in the class, including "impatient," "lively," "crazy," "restless," "talkative," "intelligent," "laughing," "uneasy," "different," "boring" and "playful." Project staff pressed for the students to act as a group, and toward the end, when they were asked who would be a spokesman for the group in a meeting with their teacher, the response that won consensus over individual names was "all of us." In another group, the discussion led to how people deal with embarrassment, and then to how the group could respond to one member, a student who frequently destroyed the group's activity in order to get attention. When the student in question stormed out, the group was able to get itself back on track, and later, in another class, it integrated him back into the group.

In January, 1985, a number of the follow-up classroom discussions had focused on what the students thought high school would be like and how they were going to prepare themselves for it. This theme was taken up again with eighth grade classes during May; in some classes, staff members began a "cooperative" story which students were asked to continue and in others a worksheet called Fact & Opinion about High School (See Appendix A-9) was used to stimulate discussion. There were also discussions about leaving junior high school and saying goodbye to friends and teachers.

At the beginning of May, the Teacher Planning Team also began talking about the June workshop. Once again, there were conflicting rumors that the school might close, that another school might close and the pupils come to the school and that two new mini-schools were going to be set up on the third floor by the district superintendent. The uncertainty for the future was not only preoccupying the teachers as they worked with the project but also was bogging down the School Improvement Committee's efforts. There were also rumors as this time that some of the classes' scores from the standardized city-wide reading were too high; the superintendent was apparently going to investigate to see whether the tests had been misadministered.

On June 1, 1985, the project held an all-day workshop for the Teacher Planning Team in the country. The morning was devoted to a discussion of the recently completed Interim Report to the Grant Foundation including the principal findings (Grannis & Fahs, 1985) and a review of the past year's activities. In this review, project staff asked teachers to comment on the positive actions taken to strengthen the learning environment, by the project staff alone, by teachers and project staff together, or by school staff alone, and on the lacks or negative actions. A number of positive actions were cited as well as many negative actions and attitudes. The top priority problem was agreed to be the lack of a uniform discipline policy; it was suggested that a meeting of teachers and administrators was needed to discuss a code of conduct that everyone could support. A second related priority need was resolving the divisiveness among the staff. After lunch, there was a discussion of whether group guidance could help solve some of the problems faced by teachers and students and a "termination" exercise of winding up the year's activities. (See Appendix A-10 for materials from the workshop).

In a follow-up meeting at the school several days later, the need to establish a code of conduct which would apply to everyone in the building, including adults, was discussed again by the Teacher Planning Team. It was agreed that the project would sponsor an after-school workshop for the whole school staff in the next week or so. The implementation of this suggestion will be discussed in the section on school-wide interventions. The final activity that the project organized with the teachers for their students was the distribution of project "certificates". If the teachers had planned a year-end party, the certificates were given out then; otherwise project staff tried to visit each class at another time.

The diversity of teachers and students' responses to them

This is an appropriate point at which to characterize very briefly the teaching that seventh and eighth grade students experienced this year. All of the characterizations are based on observations, but these will be cited in this report only in a couple of cases, to suggest the potential for this material. What is striking is how a given group of students and different teachers interacted to produce different instructional environments--the students themselves being different from one another, of course, so that within a given environment there were still more differences for individual children. We will begin with two observations that represent two teachers teaching the same group of students the same subject, one substituting for the other in the second case. The observations did not record every event or interaction that occurred, but attempted to capture representative events.

> Ms. Wallace is taking attendance at the beginning of a Computer Programming class with class 7-M. Fourteen students are present (out of a register of 30). It is the first period in the morning on a Wednesday in January. Class 7-M's homeroom teacher was 10 minutes late for the brief official class

session that preceded first period, so the class is straggling in even more irregularly than usual. The class is being held in a regular classroom adjacent, through an inner door, to a laboratory with 15 microcomputer terminals. Two boys, Al and Keith, come into class 10 minutes after the bell. Al has just seen a woman commit suicide by throwing herself onto the pavement from the top of a building just down the street from the school--"I saw it all!" "Damn!, she must have been very unhappy," Keith says. The teacher is telling the class to get quiet, the whole class continues to talk (she has no idea what they are talking about). "Give me a paper, lady, you get on my nerves," says Keith. Ms. Wallace tells the class they are going to have a test on Friday, finally they get quiet and she shows them a "Review Sheet." The girls are listening now, several boys are talking. A girl, Leanne, comes in late and starts talking about the daughter of the woman who jumped lifting up the blanket and looking at her mother--"Everyone was horrified, but it was kind of funny." The class is now all talking again, and the teacher says she is going to get the guard and leaves the room. Keith takes his review sheet to the back of the room to work alone. Leanne asks, "This is a test? What are we supposed to do?" The teacher has returned, without a guard, and she points to the Aim she has written on the board, "To do well on today's pre-test." (So far, she has not said what they are supposed to do with the review sheet they have.) Keith leaves the room. Zach, a boy sitting in the back, says, "Ms. Wallace, I'm not going to do well on this test, I didn't study for it." (The class had not been told they were going to have a test, though Zach might not have studied for it anyway.) The teacher now begins to read the items. "'Number 1. Erases the last character,' what key does that?" Students are variously writing, talking, looking around. Ms. Wallace: "'Number 2. Clears the screen.'" A boy, Eric, puts his hand in the air, says, "I know that one!" "Write it down," says the teacher. Floyd goes to sit next to Leanne. She calls to the teacher that he's just coming to copy her paper. The teacher warns him that he'll get a zero, he goes back to his seat and says, "This is what I come to school for, to be harrassed." Henry has just come into the class. The

> teacher seems to be answering some of the questions in the way she reads them, but she is going through the questions so fast that the observer, attending also to the students, has lost track. Bo is just staring into space, tells the observer he is not going to do the test. Al has his paper under his desk, is drawing a cartoon with his pen. Two more boys, Charles and Les, are talking about a comic book one of them is making, they're joined by Eric. Ms. Wallace speaks to them, Eric says to her, "You better leave me alone!" Henry has been making clicking noises, the teacher tells him to stop and a number of students go "oh oh oh." Floyd says to Zach, "I just hope I get to the eighth grade, then I can come back and laugh." Zach says, "This is why people drop out." They are both drawing. There is general confusion in the class about whether this is a serious test or a review. The students are tending to do what their peers are doing in different clusters around the room, with more girls taking the test seriously than boys. The teacher remarks, "It's a shame to get zero when you know it all." At the end of class, even some students who probably knew all of the answers turn in papers with half or fewer of the 21 items completed. Donald turns in a paper with 10 answers, says (in an observation that applies equally to himself), "They were making too much noise, I didn't understand it." Al turns in a paper with two answers, says to the teacher, "You know I know it the best in the class." After the students leave, Ms. Wallace says to the observer, "I thought you were working with this class, they seem to be as bad as ever." The observer replies that he has found that "the students do best in a structured situation where they know clearly what to do." (Those situations indeed include taking tests, but this was not clearly a test.) The observer asks if this had been a test. The teacher replies that she is going to give a test on Friday, but, because grades are due, she might have to give the students a grade before Friday and might have to use this test because she did not give one last week when the students were taking all of their other tests.

On those days when Class 7-M actually got into the computer laboratory with Ms. Wallace, the lesson generally turned out more productively. However, the first stage, in the adjacent regular classroom, was usually marked by the kind of confusion described above, and even when it was supposed to the class often did not make it to the computer terminals. By contrast, Mr. Thomas (a science teacher who also taught computer lab) was very direct, both in his structuring of a lesson and in his relating to the students. The following observation was made when Mr. Thomas substituted for Ms. Wallace with Class 7-M, on the Tuesday after the Wednesday reported above.

> Twelve students have come to class. Mr. Thomas asks the students what they are doing in computer class, several say "We don't have a program." Then several students, including Eric and Al, show the teacher their notebook. Keith and Henry are talking about something else. Still, Keith says "shhsh" to Henry and watches as Mr. Thomas writes on the board. Henry turns to Charles to talk, but Charles watches the teacher writing "How to make a times table." Mr. Thomas says, "There's no point in copying a program if you don't use it!" (He means they should end up using it on the computer terminals. Is he making a deliberate reference to the fact that it often doesn't turn out that way in this class?) Keith turns to Henry and says, "Why don't you stop talking, man, you hear this teacher saying 'gentlemen, gentlemen'?" Then Saundra comes to say something to Keith, she's talking animatedly, when the teacher asks, "Saundra, what's the matter?," she says, "Keith is using my pen." Keith is in fact using her pen, she smiles and touches him, he says, "I love it!" Now he's talking with Henry. Charles and Floyd are copying from the board, but Al's paper is blank. "I haven't got a pen," he tells the observer, the observer lends him one. Ralph says something (derogatory?) about the lesson, Al says, "Shut up, Ralph," and Henry leaves his seat to say to Ralph, "I'll punch you in the face." Keith says to the teacher, "Just call me Keith, don't call me Miller" (his last

name), the teacher says, "Sorry, there are a couple of Keiths in the school." Suddenly Henry looks up and says to Mr. Thomas, "That's right, you told us that last year, remember?" (re programming in Basic). The teacher asks the class to show the program to him once they have copied it. Eric finishes it first. Charles shows his to the teacher, he has to change something. Ralph muscles in front of him, the teacher looks at his and says, "Ralph inside" (the terminal room). Charles shows his again, he's sent inside, next is Valerie, then Al. Keith says to Henry, "She was stripped naked and I was ready to go! . . ." Keith is talking loudly to Henry, they are sitting next to each other but separated by another desk. Saundra has written "Mrs. Rocky" on her paper, she and Leanne have just started. The observer, surprised they have not finished, asks why, Leanne says, "We were talking about something." "Why this name, you're not Mrs. Rocky?," the observer says, she says, "I am" and smiles. Leanne says, "I know who Rocky is." (Oh, it's Keith.) (Some minutes pass.) Now all the students are in the computer lab working at terminals, each has his/her own. Henry says, "Mr. Thomas, I messed up, do I got to do the whole program over?" Keith, at the next computer, says "Just do '20' over." Saundra and Leanne have gone back to the regular classroom to talk some more. Keith says, "Mr. Thomas, how do I make this thing go up?" The teacher asks him a question. As Al is helping Floyd, the teacher says, "Are you finished, Al?" Al says "uh huh." The teacher says, "He's not learning a thing with you helping him." Charles is also finished and is playing with his computer. Al has gone to Valerie, now to James. He is back helping Floyd, James asks him for help. Keith is still working, but he mutters that his program is messed up and turns to work with Henry on his. Keith has been running entries together (GOTO30) on his own and Henry's programs, the observer points this out. Then the teacher shows them how to enter a question for the times table, they're now getting tables for 4, 40, etc. The boys react very enthusiastically, "Oh man, look at that, 4-8-12-16-20" etc. But when the teacher says something to Rhonda about her program, Keith says loudly, "Rhonda is stupid." Another girl, Theresa, has finished with the times table and has gone on to

> another program, "Worm Race." (Some minutes pass.) As the students go back into the classroom, singly and in pairs, they mix and talk informally and pleasantly. Keith says to someone (did not catch who), "You'd better not lose my pen," then says to himself, "I gotta get me a new notebook tomorrow." They linger in the classroom, even after Mr. Thomas says, "Let's go, you're making me late for my next class."

These and other observations substantiate a characterization of Ms. Wallace as having confused and confusing expectations, being out of touch with the students, and lacking authority with them. Mr. Thomas was clear in his purpose, respectful of students, objective about their work, and able to tolerate a mix of academic and social agendas in the classroom. The following phrases are excerpted from descriptions of other teachers; these are not complete characterizations, but do suggest the range of the project students' experiences with teachers:

> ...regularly told his classes how well behaved and educated students and their families used to be, to the point where the students mimicked him, acted up in class to avoid having to hear this, and still complained bitterly about how they hated to hear it.... judged her students very harshly, but conducted well organized classes that related the textbook to the world the students knew.... had a maternal way with students, particularly boys, that gave her a lot of authority with them, but rarely planned lessons or official class activities, was frequently late or absent, and in other ways neglected her students.... offended a number of students by talking a lot about what a good, wholesome upbringing her family had provided for her, but also invested herself deeply in challenging the students academically, maintaining a beautiful physical environment in the classroom, conducting activities to promote the social development of the students, and having fun with the students--the teacher in effect trying to

> provide in her own classroom the family environment that she felt was lacking in their lives outside.... combined strict discipline, direct teaching, and interest in the students, but gave little attention to preparation and follow through; was very direct with the students affectively, which some but not all students responded positively to.... terrified students by angry threats, outbursts, twists and pinches, and expulsions from the classroom, but in this way maintained an order in which some students felt they learned more than in any other of their classrooms.... appealed more to students' interest through stories and plays, individually paced assignments, and cooperative lessons, was a more affectively oriented teacher than most, but was perceived by some students as biased against them.... regularly came to school with liquor on his breath, conventional teaching generated a lot of challenging and fighting, but small groups he organized for reference work in the library worked very productively together.... a strong advocate for the rights of the children in public meetings, yet beat children with a stick in her classroom and wasted most class time on trivial projects.... a strong representative of teachers' rights chased and sometimes hit children with a bat.... very concerned to prepare students for the city exams, also very aware of problems in students' lives, scornful of administration's practices with students, skeptical of project's work with students, yet not very successful with students academically or personally.... hopelessly disorganized, classes chaotic.... carried out extensively planned, interest-based units, varied teaching strategies, very tuned into students' concerns, relatively successful with most students....

As we stated before, the students themselves had a lot to do with the extent to which classrooms were cooperative, productive, friendly, safe, or the opposites of these. This is very apparent in the observations from Ms. Wallace's and Mr. Thomas's classes, where one and the same student mocked and walked out on one teacher and yet exhorted his classmates to pay attention to the other teacher, and where the life, and death, concerns of the students variously drew them away from a teacher, were intermixed with a teacher's concerns, or, in other classes not described, actually drew the students and a teacher closer together.

The students in each grade were assigned to official classes, i.e. homerooms, on the basis of previous achievement. As official classes then traveled together for all of their major subjects, the students were effectively tracked by this grouping system. Reading and math scores were important for this, but course grades seemed to account for students being placed higher or lower than the test scores alone would warrant. As grades were associated with teachers' ratings of student conduct--a pattern we established both by examining the relationship between grades and conduct ratings on students' report cards and the correlation of grade point average with behavior ratings that we obtained from teachers (see below, Chapter Two), this grouping by previous grades tended to concentrate students with more pro-academic behavior in the higher official classes, 7-1 or 7-2, 8-1 or 8-2, and those with more anti-academic behavior in the lower classes, 7-4, 7-5, 8-4, or 8-5. If this system did not result in teachers' having consistently high expectations of the higher classes, it did seem to produce low expectations of the lower classes. Furthermore, it distressed students themselves, particularly students who felt they were misplaced in the lower classes, and even lower-achieving students who resented being grouped _just_ with other students like themselves.

Human Rights Committee

The first meeting for the 1984-85 school year of the Human Rights Committee took place in the middle of October. Because there were newly elected officers of the Parents Association representing parents on the committee, the project director explained the function of the committee as well as the purposes of the project. A member of the committee raised a question about a statement in the minutes of the Teacher Planning Team meeting of several weeks previous that appeared to be a negative comment about the school's guidance program. It was agreed that the rights of everyone in the school should be protected and that the minutes would be edited. The revised minutes were circulated to all the members of the Teacher Planning Team and the Human Rights Committee with an apology and the report of the decision that no members of the school community would be mentioned in the minutes by name in the future (See Appendix B). There was a request from a Special Education teacher on the committee for project help. The project director explained that the project did not have the resources to work individually with very troubled children and that such counseling was the purview of the guidance counselor but he agreed to meet with the interested Special Education teachers to discuss the matter further.

At a second meeting of the committee a week later, two new instruments, The Academic Coping Inventory (Tero & Connell, 1984) to be called "How I React" and Why Things Happen (Connell, 1985), a locus of control measure, were presented to the committee. Because the committee members felt they needed more time to review the questionnaires before coming to a decision, a third meeting was scheduled for two weeks later and memoranda explaining the purposes of the instruments were prepared. Both questionnaires were approved for use in the project; one item (# 16. I feel really stupid) of the Academic Coping Inventory was deleted because it was offensive to some committee members. (See Appendix C for copies of these new instruments).

The Human Rights Committee met for the fourth time on March 6, 1985 to discuss project activities. The protocol for The Coping Interview and a checklist which had been distributed were discussed and approved with some modifications (See Appendix C-2a and 2-b). It was also agreed that the interview would be a time for encouraging and supporting students as needed. Several additions to the Academic Enviroment Inventory were proposed; the committee members requested that the purpose of these additions be sent to them in writing with a copy of the current version (See Appendix C-8). At the next meeting of the committee on March 27, 1985 these additions were approved. At the same time, the protocol of the Locus of Causality

Interview was also approved (Appendix C-4). Again, the members stressed that in addition to gathering information from the students, the interview should be educational and therapeutic, e.g., that if the student felt that he or she could not do anything about a given situation, the interviewer should be encouraging and make a few suggestions. It was also suggested that the questions for the interview would be good for group discussions. Several teacher members of the committee (with whom the project had not been working) requested that such a discussion be conducted in their classrooms.

The last meeting of the Human Rights Committee for the 1984-1985 school year took place on May 29, 1985. At this time, the short version of the Interim Report to the William T. Grant Foundation (Grannis & Fahs, 1985) was reviewed with the committee members prior to distribution to other members of the school and the district. The committee approved the report. (See Appendix B for copies of the Human Rights Committee meetings).

School-wide interventions

Open School Night, November 19, 1984

The project staff placed a poster inviting parents to come to the Academic Striving Resource Room at the school's reception desk. Several parents of non-project students visited the room and two new students were enrolled. Ten project parents (relatives) came by with their children, both to thank the staff and to ask for further help for their children. Several parents, including members of the Parents Association, expressed interest in parent workshops and the possibility of setting up a "cool-out room" where disruptive students could be sounseled by student mentors. Project staff expressed support for exploring the ideas.

School and project staff's satisfaction with the response from parents who came to Open School Night, when it was only a small number of parents who showed up, is an example of the "best shot" accommodation to perceived reality that typified many efforts in the school.

School Improvement Project

Concurrent with the activities described thus far, a process of school-wide school improvement was being developed. The President of PEA had initiated contact between the school's principal and the Board of Education director of the School Improvement Program and had encouraged one of the members of the Teacher Planning Team to take the initiative in organizing the school staff to request the assistance of the School Improvement Program, namely, the assignment of a facilitator from the Board of Education and some resources for compensating the members of a representative, elected school improvement committee. The teacher did in fact initiate the process by organizing support for an invitation to the director of the School Improvement Program to visit the school and, in early October, a vote sponsored by the union representative on whether the School Improvement Program should be invited into the school. Twenty-one staff members, including some paraprofessionals, voted affirmatively; some were clearly skeptical but felt that it was the school's "last chance." By the middle of October, the SIP facilitator, a former Junior High School principal, was active in the school, and was invited to the October 17th Teacher Planning Team meeting; but following this, the President of PEA and other project staff purposely remained aloof from the process, deciding that the school staff would have to make the most of this opportunity on their own. The first activity of the SIP facilitators was to prepare a needs assessment by interviewing school staff, parents and students regarding the school's administrative style, instructional emphasis, climate, diagnosis and assessment and expectations for students. The first meeting of the SIP committee took place in mid-December; the committee included four teachers who were active with the project. Among the activities planned by the SIP committee was a strict lateness policy and the establishment of a "lateness" room where students were held during the first period if they came late to school. Staff seemed to cooperate and enforce this policy for several months after its initiation in February and many fewer students came late to school. The SIP committee was also concerned about school discipline and school climate but it was difficult to see any particular effect of its deliberations.

Cooperative Learning Workshop

The first school-wide intervention planned by the project staff was a workshop on cooperative learning to be given by a facilitator from the Center for Social Organization of Schools at Johns Hopkins University on February 6, 1985 from 3-5 PM. Materials about this learning approach were distributed with an invitation to all teachers and classroom aides (See Appendix D-1). Staff were also invited to visit the Academic Striving Resource Room during their free periods in the school day to learn more about the program and view a slide show. Twenty-four staff members, including the Principal, and one parent visited the project room during the day; and 27 staff and one parent attended the after-school workshop.

The school staff's participation in the workshop was enthusiastic, albeit paid, and showed the real potential of cooperative learning in the school if the school leadership were to pursue it. Project staff prepared a brief lesson guide on Teams Games Tournaments, one of the cooperative learning activities which was distributed to teachers (See Appendix D-2). Subsequently, a number of teachers tried to use cooperative learning in their classes and reported on it at the Teacher Planning Team meetings. Several found that it worked well and that the students enjoyed it and learned the appropriate materials better than in standard lessons. At the Teacher Planning Team meetings, there were several discussions of how to encourage teachers and students who used cooperative learning. Among the suggestions were publicizing winning teams in a newsletter or on a Cooperative Learning Bulletin Board. However, as had been the case the year before, no one in the administration followed up on the workshop. The project acquired master copies of the curriculum materials the school would need, but cooperative learning also requires a substantial investment of teacher time in organizing classes into teams. Without the administration's setting priorities and providing leadership, this investment by teachers did not materialize.

Workshops on the Code of Conduct

Following the suggestions of the Teacher Planning Team at the June workshop, project staff planned a workshop for the whole school staff to discuss the need for making the school's code of conduct uniform. Recurrent disruption in the halls, the auditorium, the cafeteria, and classrooms, had dominated teachers' concerns in the school throughout the year. The call for a uniform code of conduct was not simply a matter of getting agreement on what rules should apply to students, but getting administration, teachers, and other staff to take responsibility for a secure and productive environment. While organized and led by project staff, the workshop acknowledged the parallel work of the School Improvement Project committee and tried to engage that committee in the process. Approximately 30 staff members (including custodians, guards and paraprofessionals as well as teachers) and parents attended the workshop and discussed their feelings and thoughts about the existing code of conduct. This brainstorming session accepted all opinions about what rules there should be and how they should be implemented, with both penalties and rewards. The school staff seemed to welcome the opportunity to discuss these issues and agreed to participate in a follow-up workshop a week later, on June 25th, just a few days before the end of school. Again, about 30 members of the school community attended. Project staff facilitated the group's determination of the most important items for a code of conduct. In the second part of the meeting, the participants were divided into five small groups to discuss how the five most important items would be implemented, with consideration of rewards and punishments. (For minutes of these two meetings and the follow-up memo, see Appendix A-11).

It was agreed that there should be another meeting just before school opened in September for further discussion of the code to be implemented in the coming school year.

Administration of instruments: Second semester

The Academic Coping Inventory was administered to project students in the first two weeks of February. Because this instrument asks about how students cope with academic failure, it was decided that the subsequent group activity should focus on the students' successes. This exercise elicited varying responses from the different groups, with some clearly acknowledging accomplishments that they were proud of, others clearly anxious about revealing anything about themselves, and some so competitive that they all spoke at once. In all cases, some constructive group activity evolved.

Between the middle of February and the end of March, the Nowicki-Strickland Scale of Internal-External Control, the Hare Self-Esteem Scale, and the Connell Locus of Control Scale were administered to all project students. Whenever possible, group activities were conducted with the students after they had completed the questionnaires. Project staff had originally planned to administer the Academic Environment Inventory for a second time at the end of April and the beginning of May. After an increasing number of complaints from students who were tired of taking questionnaires, project staff decided not to give that instrument again.

General school climate

The uncertainty about the school's future that had marked the end of the previous school year continued into this second full year of the project. The initial overestimation of the student population by the administration and the subsequent necessity to cut back considerably on teaching staff set a tone of resentment and low morale among teachers which underlay all the other activities in the school, including those of the project. Teachers' programs were changed several times during the fall as more staff were let go; one such change on October 24th was observed by project staff to be very disruptive to both students and teachers. At about this time, the newly arrived SIP facilitator commented to project staff that the overcrowding of children in the cafeteria created a potentially dangerous situation. Throughout the fall, in fact, there were a number of incidents of disorder in the halls, classrooms and lunchroom. Project staff often heard of these disorders immediately as students clearly considered them adults who would do something to mitigate the disorder. In mid-October, there was an incident involving larger boys beating up smaller boys which was serious enough to necessitate the involvment of the police as well as parents.

In late November, students were very upset by the reported rape of a female student (outside of school) and the stomping of an eighth grade boy in the hall by about ten other boys. Such events caused anxieties and stress for teachers as well as students and were discussed at Teacher Planning Team meetings.

Just before the Christmas break, there was a serious accident in the gym when in the midst of roughhousing a boy had jumped on a girl and everyone feared her back was broken. This turned out not to be the case but the police were called and there was a lot of confusion about how the event should be handled. Once again, project staff were called in immediately by students who seemed to feel that we would provide objectivity and support. The students appeared to be more in control of themselves than some staff members.

Following the assembly in honor of Martin Luther King Jr. in the middle of January, there was also considerable unruliness in the school. Staff agreed that it is a difficult thing to show the violence and hatred of crowds that attacked the Civil Rights activists without stirring up students.

The priority given by teachers and other school staff to discipline problems (both in the SIP Committee and at the project's Teacher Planning Team workshop) was an indication of the continuing undercurrent of disorder in the school which would occasionally flare up into incidents.

Towards the end of the spring, as had been the case in the previous year, the status of the school was again in question causing alarm and divisions among staff. This uncertainty was somewhat resolved when, at a specially called faculty meeting on May 8th, the principal announced that a neighboring school was going to close and many students would be coming to the school from the closed school. She also announced that the superintendent was creating two mini-schools (academies) on the third floor which would be separate from the rest of the school. Two teachers spoke in a degrogatory way about the teachers who had agreed to teach in the mini-schools. Various teachers tried to get project staff involved in the politics of the situation. Towards the end of May, there actually seemed to be competition among teachers for registering students either in the study school or the two mini-schools (the number of students being related to the number of teacher positions needed in the fall). The district superintendent's way of attempting to change the school often fostered divisiveness in the school, as the mini-school intervention illustrated.

By the middle of June, the principal had confirmation of only 54 new students enrolled in the 6th and 7th grades; she had been given no indication of the numbers coming from the closed school. By the end of June, she heard that the school would be receiving only 110 students from the closed school instead of 150.

Once again, the school year was ending with the prospect of major dislocations of students and staff and reorganizations in the coming year, the final year of the project. Project staff could only hope at that point that the school-wide concern for more effective disciplinary practices evidenced in the two June workshops on the code of conduct might provide a starting place to begin constructive activities in the new school year. With this in mind, the project staff decided to accompany the compensation checks with a memorandum reiterating the connections between discipline, stress and education, a brief report of the major findings from the Interim Report on stress, and a description of the relationship between the services being provided by the project and the findings on stress (See Appendix A-12).

1985-1986 SCHOOL YEAR

Opening of school, September, 1985

On Friday, September 6, 1985, the project director and this writer conducted the follow-up workshop on the Code of Conduct which had been scheduled at the end of the previous school year. About 60 teachers and paraprofessionals attended the workshop which was part of the school's mandatory orientation. There were many new teachers in the school, because of the mass transfer of students from the closed school. Although this was the third day back at work for school staff, the project's workshop was the first occasion when there was a deliberate effort to get the staffs of the two schools to work together. The project director described the project and the general consensus that cooperative implementation of a Code of Conduct would make the school less stressful and more productive for students and teachers alike. Two different presentations of a Code of Conduct were then distributed to the staff, a brief one prepared by project staff (a listing of the main items for a code and some rewards and punishments discussed at the June workshops) and a fuller description of program goals and student behaviors prepared by one of the Deans. After considerable discussion, the shorter Code was adopted, with some rewording, to be presented to the students on opening day; and it was agreed that the longer description could be used as the basis of classroom discussions. It was also strongly suggested that the code should be discussed with students on the first day of school and students be asked if they had anything to add to the code. The project director then asked whether those present agreed to work together to implement the code and there was an affirmative response. A description of the meeting and the revised code were circulated to all the teachers the following Monday, the first day of school (See Appendix E-1).

On the first day of school, all the students went initially to the auditorium. The students' names were called by class. Most of the students expected in the two top eighth grade classes were in school, but many whose names were called for the lower track eighth grade classes and the seventh grade classes were not in school. Project staff estimated that the total number of students present was approximately 140. This number was considerably below the enrollment of 400 anticipated by the principal. Once again, project staff foresaw that this overestimation of students would lead to the letting-go of a number of the 37 teachers assigned as well as reorganization of students and teachers programs, all guaranteed to create stress in the school. On that first day, a number of students were very upset to hear (for the first time when their names were called in the auditorium) that they had been left back or assigned to special education classes.

The second day of school proved to be even more confusing: The xerox machine was broken and none of the teachers had their programs so students were held in their official classes. Because of the broken xerox, the Code of Conduct was not distributed to students. Project staff then offered to xerox the code and bring it to the school. By the third day of school, the teachers' programs had been xeroxed at the district office but already needed changing because some of the new teachers had left the school. On the fifth day of school, discipline was the topic of the eighth grade assembly which was supposed to be followed by discussion by the classroom teachers. A new teacher who was the seventh grade dean complained to a staff member about the first item on the Code because it looked to her as if teachers and students were considered to be equal. In spite of the fact that the teachers had agreed on the Code, several of them had concerns about the Code as written.

One change in the scheduling that appeared to be better in this school year was that there were two lunch periods for the students. The smaller number of students eating at one time made the lunchroom less crowded and more manageable.

According to data presented to the teachers at the Faculty Meeting in November, attendance of students during the month of September was 66% for the 6th grade, 65.6% for the 7th grade, and 69.5% for the 8th grade as compared to the city-wide average of 86%.

Classroom interventions: Teacher Planning Teams

Because of the two lunch periods, project staff found that we needed to hold two meetings for classroom teachers, one for the eighth grade teachers and one for the sixth and seventh grade teachers. Project staff explained that the primary focus of the project this year would be the students who already had permission to participate in the project, namely, the eighth graders and some seventh grade hold-overs and "gates" students. The project planned to try to help with group guidance, relating to the Code of Conduct and other activities to improve the learning environment such as cooperative learning. The new project staff member who would be in the school three days a week would be available to counsel students individually or in small groups. Project staff also decided to work with the eighth grade project students who were in one of the mini-schools (academies) on the third floor. (Two of the academy teachers had been involved with the project from the beginning and were also eager not to lose touch with project staff).

By the middle of October, members of the Teacher Planning Teams were already saying that no one was enforcing the Code of Conduct.

Following the pattern of activities that had been initiated by the project in the previous year, project staff suggested beginning work with eighth grade students on high school applications. Project staff had begun this activity with several eighth grade classes at the beginning of October. At the same time, there were several rather ineffective assemblies for the eighth grade about high school choices.

Because several project students had been held-over in the seventh grade, project staff also became involved in the implementation of the policies developed for mid-year promotions. The principal, dean and various teachers seemed to have different criteria for promoting these students and project staff tried to encourage some uniformity.

Staff observations in the school and discussions with project students made it clear that many teachers, especially the ones new to the school, needed help with classroom management. It was decided to encourage the teachers to discuss how to handle difficult students and difficult classes because different teachers have different techniques and insights and they could begin to help each other by sharing these ideas.

At the end of November, many changes were made in the seventh grade classes: Some project hold-overs were promoted and some of the bigger and older (and more difficult) hold-overs were placed in a special academy that the principal herself was going to monitor. Unfortunately, several teachers whose programs were changed so that they could teach in this new academy were not consulted about it, which caused a great deal of resentment. The project's teacher meeting became the locale for sharing by the teachers about these new assignments and how to handle some of the more difficult boys. Talking about students as cases (in a rather clinical model) got the teachers involved with each other and thinking about what were the best techniques in dealing with individual students and led to more constructive sharing of ideas.

In the middle of December, there was yet another change of programs for students; teachers also complained about having no planning meetings for working with the boys in the new academy. Project staff then encouraged the principal to hold a meeting for all the staff connected with the new academy so that teachers would know what was expected of them and what the several counselors from a community-based organization would be doing. A major focus of that meeting which took place on December 18, 1985 was a discussion of the individual needs, strengths and weaknesses of the fifteen boys involved. Several teachers asked for help from the counselors and for time to meet together so that subject matter could be coordinated.

At the beginning of January, 1986, the classroom teacher of the top eighth grade class notified us that she was leaving the school because her family was moving. She was concerned about the disruption that this change would bring to her class and asked project staff to help her in preparing them for her departure. Several group guidance sessions were then held with this class which was dismayed at the prospect of losing its teacher. The first discussion centered on what the consequences might be; students voiced a number of concerns, including the fact that they would have a strange new teacher, that they might cut classes, that their grades would drop and that they would have no one to talk to about their problems. While assuring them that project staff would continue to be there and available to them, we also encouraged them to think about how they could take care of themselves. After some discussion, they suggested they could work together and make an effort to keep going and not "bring themselves down." This class in fact was very demoralized for the balance of the spring, and their resolve at this time seemed like whistling in the dark.

At about this time, the project staff became concerned about what could be done in the last five months of the project to leave a legacy with the school. It was felt that the best we could do was encourage teachers to use the various group guidance ideas for helping students to talk about what was getting in the way of their learning and ability to get along with each other and the adults in the school. Toward the end of January, one of the teachers who had been working with the project asked for our help because some anti-Semitic phrases had been written on her blackboard. A project staff member asked another teacher who was black to conduct a session on prejudice and racism which was quite effective with the class in question. There were several other incidents, about this time, of conflict between teachers and students and evidence of little cooperation between teachers to straighten things out.

At the beginning of February, the Teacher Planning Teams were still talking about how to deal with difficult students and about the need for a uniform Code of Conduct! They voiced the need to enforce the rules and work together, yet even during our meetings there seemed to be a strong undercurrent of hostility among the teachers on the planning team. They also expressed discouragement about being able to improve conditions in the school; they saw the need for a code that all would follow but did not seem to feel any responsibility for joining together. Project staff concluded that there were limits to what we could do in the circumstances but staff did discuss the possibility of a school-wide workshop.

Project staff decided to conduct the Academic Environment Inventory feedback to the students as a cooperative learning activity using graphs similar to those used in the previous year and a new worksheet (See Appendix E-2). The need to give all the students a good feeling about going to the high schools where they were accepted was also discussed with the Teacher Planning Teams, as project staff had noted that many students were very disappointed at having to go to their zoned high schools.

Throughout the school year, the project staff members, especially those who were in the school three days a week, spent time talking with individual students about both school and home problems. In many ways, this time spent counseling individuals or small groups of students was the most constructive and gratifying of the project's work; staff members felt they had helped individuals cope with their stresses. Staff also planned a group lesson about stress and a stress relaxation exercise which was carried out in several classes (See Appendix E-3).

At the beginning of May, project staff began planning the final June all-day workshop with the teachers. Teachers were beginning to hear rumors that the school was going to be reorganized again into several academies or mini-schools, meaning that for the fourth time since the project entered the school whatever gains the project had made within the school would probably not extend into the following year. A number of the teachers with whom we had worked were already planning to leave the school. The teachers continued to talk in project meetings about the violence in children's homes, the effects of which often had to be dealt with before any teaching and learning could take place. They commented that they hate to hear about the violence in the home and on the streets but realize that they must listen in order to let the students vent their distress and anxiety.

Human Rights Committee

As in the past three years, the Human Rights Committee served as the school-wide organization which monitored the research and intervention activities of the project. The first meeting was held in the middle of November. The new president of the Parents Association, who was unfamiliar with the work of the project, voiced immediate concern that a white counselor had been hired by the project, though he said that he had seen the counselor working effectively with the students. The Committee approved of the project's plans to support the school's efforts to use cooperative learning in subject classes and to fund the attendance of two teachers at a Math Cooperative Learning Workshop at Johns Hopkins University in Baltimore. The Committee also approved the research plan to administer the revised Academic Environment Inventory to all the classes containing project students (all the 8th grade and several 7th grade classes), with non-project students taking the questionnaires anonymously, in December. It also approved the administration of a new instrument, a distress symptoms questionnaire called Self-Report (See Appendix C-5) as well as the idea of trying to make contact with the prior year's 8th grade students who would be invited to an after-school reunion in the spring.

At a second meeting of the Human Rights Committee in late April, 1986, the project's activities were reviewed and future plans were discussed. Among the new activities were a plan interview project students about how they were coping with stressful events, what they feel they have gained from junior high school and their anticipations about high school and to administer the Academic Coping

Inventory which the project had used the previous year. The format for a spring interview of eighth graders (See Appendix C-6) and the Academic Coping Inventory were approved by the Committee. The plans for a 9th Grade Reunion on May 7th, which had been approved in principle at the last meeting, were then presented. An information sheet, a short form of the Academic Environment Inventory, and the self-report distress questionnaire were approved for administration at the reunion as well as the proposal to offer a five dollar stipend to students for their participation. Committee members suggested that pictures should be taken of the reunion and that students should be asked what would have helped them to be better prepared for high school. Lastly, the Committee approved the plan to request permission from parents of 8th grade students in the project to follow the students as they attended high school; it was agreed that this follow-up would consist of two in-person interviews with the students in their schools and monthly contact by telephone. The Committee agreed that such a follow-up could be very helpful to many students.

The Ninth Grade Reunion

On May 7, 1986, the project staff held a reunion for the project students who had been in the 8th grade in the previous year and were then attending high school. One hundred and two students were invited by a letter which indicated that project staff members were interested in how they were doing in high school and would give them a couple of short questionnaires to answer, a shortened version of the Academic Environment Inventory and the self-report distress instrument (See Appendix C-7).

Fifty-four students, some of whom had not been in the project but had heard about the reunion from friends, attended the after-school meeting. After filling out the questionnaires, the students appeared to have a very good time talking with each other and with project staff and enjoying refreshments provided by the project. As the Human Rights Committe had suggested, photographs were taken and later mounted in a display which hung outside the project office for the remainder of the school year. Interestingly, the photographs were of great interest to the current 8th grade students, many of whom asked if the project would give a reunion for them. Project staff concluded that this social event had been a successful intervention which helped to humanize the students' school experience. From a research point of view, the short version of the Academic Environment Inventory developed for this reunion was useful in identifying items to include in the instrument in use in the Project on Academic Striving Follow-up being conducted in the 1986-87 and 1987-88 school years.

School-wide interventions

Workshop on Code of Conduct, September 6, 1985

This first school-wide intervention has been described already in the section, Opening of School, 1985.

Open School Night, November 21, 1985

The Project Director and the President of the Public Education Association were invited by the principal to participate in a panel discussion for parents called "Parents as Partners," and the latter was able to attend (See Appendix E-4).

Workshop on School Climate, March 10, 1986

In the late fall, it became clear that the school staff was not implementing the Code of Conduct in a coordinated and effective way. Project staff began talking with the Teacher Planning Teams and the Human Rights Committee about a school follow-up to the Code of Conduct Workshop. The purpose of this workshop would be to discuss the Code of Conduct which was not working: To ask for suggestions for positive action, to identify the obstacles, and to decide on some priorities and who would implement them. It was decided to try to coordinate and co-sponsor the workshop with the School Site Management Committee which had been working on many of the same discipline issues. In preparation for this workshop, the Academic Environment Inventory was revised somewhat to make the stressors applicable to teachers. Teachers were then asked to fill in the questionnaires on an anonymous and voluntary basis. Twenty-two teachers returned the questionnaires.

Thirty-seven staff members, including the principal, teachers, paras, lunchroom aides and custodians, and three parents attended the after-school workshop. In an effort to get staff members who normally did not talk to each other to do so, project staff got staff members to count off by eight and then to sit at eight tables numbered one to eight. The project director opened the workshop by reporting on the responses of teachers and students to the Academic Environment Inventory. The stressful events which teachers seemed to feel occurred most often and were also most upsetting were:

1. My students did worse on a test than they should have.
2. I felt unsafe in the school.
3. People in the hall were bothering the class.
4. I didn't have the materials I needed.
5. People in the class wouldn't get quiet.

The project director then reported on the events the students, mostly in the eighth grade, indicated bothered them the most when they filled out the Academic Environment Inventory in the fall:

1. I did worse on a test than I should have.
2. I was warned I might not pass a subject or pass to the next grade.
3. Someone took something from me.
4. Someone hit me or kicked me or pushed me
5. Somebody treated me like I always do wrong.

The Chair of the School Site Management Committee than introduced the list of school discipline problems prepared by her committee for discussion and action. Project staff then facilitated the discussion of each major topic by a group of school staff members seated at separate tables, made notes on the suggestions for procedures, referrals, consequences and follow-up, and wrote up the suggestions for distribution school-wide by the Chair of the School Site Management Committee. (See Appendix E-5). The minutes of the workshop were indeed distributed, but no further action was taken. When project staff asked teachers in a luncheon meeting a week later what follow-up to the workshop should be taken, the teachers responded that the next step was up to the administration. Project staff heard no further reference to the Code that spring.

Final project workshop, June 14, 1986

As in the previous year, teachers from the Teacher Planning Teams and from the Human Rights Committee were invited to the all-day June workshop; eleven teachers attended. The project director described the work of the project over the four years and how at the end of each project year the school had been faced with major organizational changes. In response to his question about the teachers' perceptions of the school's climate over the years, one teacher commented that the past year had been the worst. The director then presented some preliminary findings on the relationships of the stress factors of the Academic Environment Inventory, the distress factors of the Self-Report distress instrument and students' mid-year grades. Some related findings regarding students' reactions to stress and their coping were presented by another project staff member. The differences in boys' and girls' reactions, general coping and academic achievement were also discussed by project staff and teachers.

In the second part of the workshop, teachers were asked what kinds of things stressed them. One teacher who had attended the first project workshop in June, 1983, commented that the stressful events were still about the same. Teachers were then asked to think of the things that might help to improve the school's climate for learning. The final activity of the workshop was a Relaxation Exercise, similar to the one used in the school with classes of students, conducted by a project staff member. (See Appendix E-6 for the summary minutes of this meeting).

Staff time in the school

The project director spent an average of a day a week on site during each school year of the three-and-a-half year duration of the project in the host school. He observed and interviewed, met with school staff and project staff, and participated in group guidance activities and the administration of instruments with project staff, students and teachers.

The President of the Public Education Association averaged two days a month in the school during the planning semester, principally as Chairperson of the Human Rights Committee. During the three full years of the project, she also carried out a counselor-researcher role for an average of two days a week in the school. This role involved extensive participant observation, administration of instruments, and counseling activities with students and staff individually and in groups.

Over the three and a half years in the school, six counselor-researchers were involved in all of the activities of the project, from counseling students and staff to participating in meetings with school staff and carrying out various data collections and analyses. The total time of the counselor-researchers averaged fourteen hours a week during the first half year and twenty-eight hours a week for the three full years of the project.

* * *

In drawing the first part of this report on the planning and implementation of interactive research and interventions to a close, one can not help but be reminded of the conclusions of the Interim Report (Grannis & Fahs, 1985). Certainly, the recounting of the daily hassles and major crises, the bureaucratic assaults to student learning and staff morale, the periodic demonstrations of success and strength, and the friendships between project staff and students and teachers provides once again the context for the discussion of the research data to follow. Again, the tensions created by interactive research were present: Intervention activities and research requirements competed for time, attention and priority. In the end, one can not help but wish that the interventions had been more effective and that their effects had been more sustained. Certainly, many individual children were given attention, help in coping with their stresses, and love by project staff over the four years of the project; many hardworking teachers were also helped to cope with their stress and were periodically renewed by the professional contact with project staff. We hope that the greatly enriched understanding of the effects of in-school stressors on children's academic achievement that will be described in the second chapter of this report will contribute to making schools more responsive to the needs of both children and adults.

CHAPTER TWO

STATISTICAL ANALYSES OF STRESS AND SOCIAL SUPPORT IN THE SCHOOL AND THEIR RELATIONSHIP TO STUDENTS' DISTRESS, ACADEMIC ACHIEVEMENT, SELF ESTEEM AND LOCUS OF CONTROL

This chapter will report a variety of statistical analyses that are all concerned in one way or another to examine the reliability, the validity, and the utility of the project's measurement of students' stress and social support in the school.

Revision and factor analysis of the Academic Environment Inventory: Things That Happen In School

Beginning in 1982-83, the Project on Academic Striving has been developing an instrument, hitherto called the Academic Environment Inventory (AEI), to measure students' experience of stress and social support in the school and classroom environment. The stressor events and support events that the AEI includes have been repeatedly observed in the school during the two years since the instrument was created. Our discussion in the previous section on the effort to reduce stress during this time substantiates this claim. Two stressor events were added to the 18 already in the original AEI, for the revised version administered in the school in Fall, 1985:

--People were throwing things and fighting in the lunchroom.

--Someone took something from me.

Other stressor events that have been observed that might be important to add to a future revision include having one's possessions damaged, the littering or damaging of school property, finding the toilets dirty or crowded, and being harrassed about drugs or sex. Two major categories of stressors that have not been included in the revised AEI are explicit issues of transition from one school or level of school to another, and performance demands or threats which are typically measured by test anxiety instruments.

Four social support items were added in the 1985 revision:

--There was a sister or brother or friend at home who I could count on for help when I needed it.

--There was an adult at school who I could talk to about almost anything that was bothering me in school.

--There was a student at school who I could really count on for help when I needed it.

--There was an adult at home who I could talk to about almost anything that was bothering me in school.

These items do not actually represent events so much as persons who might be important in a student's social support network, or opportunities for social support. Most other research on social support has emphasized this latter approach (e.g., House, 1981) and we wanted to find out if these items would figure differently from the events items in the analyses.

All told, the revised instrument contained 80 items, a reaction and a frequency question addressed to each of 20 stressor events and 20 support events. From the beginning, the instrument has been titled for the students who took it "Things That Happen in School" (THIS), and we shall henceforth call it THIS. We have recently undertaken yet another revision of the instrument, which will be reported at a later time.

THIS presents the twenty stressor events and the twenty support events in random order, and asks the respondents to make two judgments about each event: how they would react to the event if it happened (from feel very good to feel very upset), and how often it did happen during the past week (from almost never to often). The first, reaction response now appears to us to be very closely related to what Lazarus has called "appraisal," a "process through which the person evaluates whether a particular encounter with the environment is relevant to his or her well-being" (Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen, 1986: 992). We have hypothesized that students' appraisal of events in school moderates the impact of the actual occurrence of the events, on their psychological well being, their achievement, and their health.

For purposes of comparison across different points in time, all 68 of the original items were retained in the revised AEI of 80 items, THIS. THIS was administered to 166 students in the project school in November, 1985, 92 project students and 74 students who were in the eighth grade but were not enrolled in the project (many of these latter students had just come to the school in September, 1985, when the project was no longer enrolling new subjects). A factor analysis of THIS showed that, when the number of factors was set at four, all but two of the 80 items loaded first on the dimension with which it was meant to be associated. Support Appraisal accounted for 49.3% of the total scale variance, Stressor Appraisal for 21.5%, Support Frequency for 15.8%, and Stressor Frequency for 13.4%. There was, then, the greatest systematic variance around how good students felt about the support events, and the least variance around how often the students experienced the stressor events.

Next, each of the subscales of THIS was subjected to a separate factor analysis. Table 1 labels the factors for each subscale that account for at least 5% of the total subscale variance. The table shows the percentage of subscale variance accounted for by each factor and the items that loaded principally and at least .35 on that factor, starting with the highest correlating item. (Items that are printed in parentheses loaded at least .35 on the given factor, but loaded more strongly on another factor. In subsequent analyses with other variables, these items will be included only with the factors on which they loaded most strongly.)

The stressor appraisal and frequency factors particularly seem to contain meaningful clusters of items, which suggests the construct validity of the subscales Stressor Appraisal and Stressor Frequency. The greatest systematic variance of Stressor Appraisal among the students occurs around the dimension labeled "Assaults on Safety and Integrity." The next factor to emerge in Stressor Appraisal, labeled "Disruption of Classwork," appears to emphasize the impact of social and physical events on academic events, but it is still distinct from a later factor, "Academic Problems." It is noteworthy that the third Stressor Appraisal factor, labeled "Physical Assaults on Self and Possessions," associates the item "I didn't have a pen or paper or my book to do my work in class," with physical assaults, which is consistent with the students' oft-expressed claim that their writing material or book was taken from them. Another interesting finding is not reflected in the table; an item worded "Someone hit me, or kicked or pushed me," loaded .31 on both Disruption of Classwork and Physical Assaults. This item did not load at the .35 level in part because it had relatively little variance to begin with, this being the event that evoked the strongest stressor appraisal of all the events on THIS.

The support appraisal and frequency subscale factors are somewhat less distinct from one another, in part reflecting the fact that the support events tended to be worded in a more general way than the stressor events, and in these cases could have reflected either academic or social and physical happenings. (This is being remedied in a further revision of THIS that we are constructing at the time of writing this report.) Still, the four newly added items pertaining to people who are available to give support at home and in school all load into the first Support Appraisal factor, labeled "People Support," along with various items representing specific acts of support. At the same time, three of the four items in question, those pertaining to the availability of peers in both home and school and adults at home, do emerge as a separate factor in Support Frequency, though not a strong one. It appears that the students' appraisal of the hypothetical availability of the persons indicated is integrated with their appraisal of personal support events more generally, but that the actual availability of these persons is perceived more distinctly. The particular location of the item on there being an adult at school to talk to, among the several other Support Frequency items that have been labeled "Verbal Support," is also noteworthy here. The items found together as "Encouragement," the strongest factor in the Support Frequency subscale, are a meaningful cluster of events. Finally, there is substantial overlap between the Support Appraisal factors labeled "Friendship" and "Help," and the Support Frequency factors labeled "Help" and "Friendship."

Overall, the factor structure of THIS indicates that the students were responding to it in meaningful ways, discriminating among the four principal types of items and reacting fairly consistently to subsets of items from each subscale. The Stressor Appraisal and Stressor Frequency subscales particularly suggest that the students experienced different kinds of stressors in the school environment. The nature of their responses will be revealed further by other analyses that we will report.

For the purpose of defining THIS factors that could be used efficiently in analyses with other variables, a further factor analysis was done specifying that just three factors would be yielded for each domain--a number that was itself the result of rejecting a two-factor solution that appeared to be too simplistic. For three of the subscores, Stressor Appraisal, Support Appraisal, and Support Frequency, the resulting factors were less clearcut than those in the original factor analysis. The condensed Stressor Frequency factors, however, appeared to be stronger than the original ones, and indeed have proven to be so in subsequent analyses with other variables. Table 2 lists the items that loaded principally and at least .35 on each of the three factors resulting from this reanalysis of Stressor Frequency.

Simple and composite dimensions have been constructed from the factors presented up to this point, for the purposes of subsequent analyses with other variables. The dimensions constructed for Stressor Appraisal are Assaults on Safety and Integrity (the original first factor for this subscale), Academic Trouble (composed of the items for the second and fourth original factors), and Physical Attacks (the original third factor). The dimensions used for Stressor Frequency are the three that resulted from the condensed factor analysis: Academic Trouble, Physical Assaults, and General School Disruption. For Support Appraisal, the dimensions defined are People Support (the original first factor), Friendship and Help (from the second and third original factors), and Encouragement (the original fourth factor). The dimensions for Support Frequency are Encouragement (the original first factor), Help and Friendship (the second and third factors), Verbal Support (the fourth original factor) and Person Support (the fifth factor). These dimensions, and the labels employed for them in subsequent tables, are summarized in Table 3.

Table 3 reports the means and standard deviations for each of the composite dimensions of THIS. We shall cite the statistics for the students in the total sample of 159 for whom there were complete scores. On a scale of 1 to 5, from very good to very upset, the project and nonproject students combined reacted more strongly to Physical Attacks (3.98) than to Assaults on Safety and Integrity (3.72) or Academic Trouble (3.77). On a scale of 1 to 3 from almost never to often, they reported General School Disruption (2.0) to be occurring more often than Academic Trouble (1.56), which in turn they perceived happening more often than Physical Assaults (1.39). The students' appraisals of support, on a scale of 1 to 5, now from very upset to very good, were virtually the same for People Support (4.10), Friendship and Help (4.06), and Encouragement (4.12). However, the students perceived Help and Friendship to be actually occurring less often (1.74) than Encouragement (2.04), Verbal Support (1.99), or Person Support (2.05). Virtually all of these observations about the relative level of the THIS dimension scores apply to the sample of project students alone, who will be the subjects of more intensive analysis in later sections of this report. Of course, this means that the patterns also obtained for the non-project students. Means and standard deviations for the project students are reported in the third and fourth columns of Table 3.

Reliability of Things That Happen In School

An analysis has been performed on the THIS data from all 166 1985-86 project and nonproject students to ascertain the Cronbach alphas for each of the THIS subscales. The Cronbach alpha measures the internal consistency of a set of items, and is thus a measure of inter-item reliability. The alpha was .87 for the Stressor Appraisal subscale, .79 for Stressor Frequency, .90 for Support Appraisal, and .84 for Support Frequency. These alphas are similar to the ones obtained with the project students and a private school sample, for the earlier version of the AEI (Grannis & Fahs, 1985). The frequency subscale alphas are somewhat lower than the appraisal alphas, which is consistent with the expectation that the frequency of events would be less consistent for individuals than their appraisal of them.

Consistency of Stressor Appraisal and Stressor Frequency over time

How consistently did the students perceive the stressor events over the three years between sixth and eighth grade? Both the possibility of changes due to the influence of the Project on Academic Striving, or stability of the school environment, and changes or continuities stemming from personality and developmental tendencies of the students themselves, must be sorted out in trying to answer this question. For this analysis, we have used a subset of items that remained unchanged between the 1983 AEI and the 1985 THIS, the appraisal and frequency items addressed to 16 stressor events that were used in all three administrations of the instrument. The sample is the 90 project students who completed THIS in the eighth grade in 1985 (these 90 also completed the Distress Scale, described below). Of these 90, 53 had completed the original AEI in 1985, and 72 had completed it in 1986. The number of students in the cohort had increased from year to year because new students entered the school in the seventh grade and because, in addition, more parents gave permission for their children to participate in the project in each successive year.

Table 4 shows that the level of Stressor Appraisal dropped from 3.84 to 3.47 for the boys between sixth and seventh grades, while for the girls it dropped from 4.04 only to 3.92. In other words, the average appraisal for the boys was shifting from near "upset" toward "makes no difference", while for the girls it stayed close to "upset".

Both the boys and the girls perceived the stressor events to be happening somewhat less frequently on the average in the seventh and eighth grades than in the sixth grade. The average frequency shifted from close to "sometimes" (1.86) part way toward "almost never" (1.64) for the boys and girls combined. Without a comparison group that had not worked with the Project on Academic Striving, it cannot be said whether the drop in Stressor Frequency was a project effect or just the students adapting on their own to the events of the intermediate school environment. From our observations of the continuing generation of stressor events in the school, despite the project's attempts to reduce their frequency, we conjecture that developmental adjustment is an important component of the students' shift in frequency, or perceived frequency, between sixth and seventh grade. The fact that there was not another shift in eighth grade, while the project continued its efforts during this time, supports this conjecture.

It will be recognized that the figures in Table 4 pool students who entered the cohort in sixth grade with students who entered it in seventh grade, to obtain the seventh grade means. When the analysis is conducted for just the students who entered in the sixth grade, the patterns are the same. For 30 boys, the drop in Stressor Appraisal from 3.82 to 3.47 was highly significant (t=3.16, p<.01), as was the decrease in Stressor Frequency from 1.81 to 1.56 (t=4.66, p<.001). For 19 girls, Stressor Appraisal stayed the same, 4.02 in sixth grade vs. 4.04 in seventh, but Stressor Frequency declined from 1.87 to 1.60 (t=3.78, p<.001). (Figures not shown in Table 4.)

From Table 5 it appears that there was only a low correlation between Stressor Appraisal in the sixth and in the seventh grade (r=.26, p<.05), and even less between the sixth grade and the eighth, but that the correlation between seventh and eighth grade was substantial (r=.56. p<.001). Tables 5A and 5B show that the pattern was actually quite different for boys and for girls. For girls, there was as high a correlation between sixth and eighth grade Stressor Appraisal (r=.51, p<.05) as between seventh and eighth grade (r=.52, p<.001). For the boys, Stressor Appraisal in seventh and eighth grade correlated .42 (p<.01), but between sixth grade and eighth it correlated -.15 (n.s.).

For both the boys and the girls, the intercorrelations were higher for frequency than for appraisal. For the total sample, Stressor Frequency correlated .61 (p<.001) between the sixth and the seventh grade, and .61 (p<.001) between the seventh grade and the eighth (Table 4A).

Stressor Appraisal and Stressor Frequency were essentially uncorrelated, though there was some tendency for the boys who said they got more upset by stressor events in the sixth grade to report these events happening more frequently in the sixth grade and again in the eighth grade. The general pattern confirms the conceptual distinction between appraisal and frequency as two quite different kinds of judgment about stressor events.

In constructing Things that Happen in School, we expected there to be more consistency in the students' appraisals of stressor events from one year to another than in the frequencies that the students reported. The project did work to reduce the overall frequency of stressors experienced by the students, but it was anticipated that such changes would vary greatly from one individual to another, as a function of the different school and classroom contexts in which stressor events occurred. The high intercorrelations for Stressor Frequency indicated otherwise. This then underscores the question of what other measures correlated with Stressor Appraisal and Stressor Frequency. We will pursue this question extensively in later sections of our report.

Table 6 shows that the cohort students' appraisal of how good support events made them feel dropped between sixth and seventh grade, especially for the boys, and that the boys' perceptions of the frequency of support events dropped between sixth and seventh grades. These findings are parallel to the results for Stressor Appraisal and Stressor Frequency reported above. From Table 7 it can be seen that the correlations between Support Appraisal in different years, and between Support Frequency in different years, were consistently significant, though in the latter case at a somewhat lower level than the corresponding correlations for Stressor Frequency. This points again to the importance of understanding the factors that contributed to the consistency of individual students' perceptions of the school environment.

Table 6A displays the means and standard deviations of the eighth grade non-project students' scores on the abbreviated appraisal and frequency subscales used to compare the scores of project students in successive years (Tables 4 and 6). The non-project students' Stressor Appraisal, Stressor Frequency, Support Appraisal, and Support Frequency were all very close to the scores reported in Tables 4 and 6 for the project students in eighth grade. This then adds to the evidence that the Project on Academic Striving did not alter the project students' level of stress and support in the school environment, although it may have affected how stress and support were related to each other.

Construction and factor analysis of a distress symptoms scale

The proposal for this research argued that it should be feasible to examine the relationship between school stress and nonspecific, psychological and physical distress. The investigators anticipated being able to administer a revision of the Psychiatric Epidemiology Research Interview (Dohrenwend et al., 1980), but the project's Human Rights Committee did not approve administering a selection of items from this instrument; the items were judged to be too adult for middle school students. In the fall of 1985, the Human Rights Committee did approve 15 slightly reworded items that Grannis and Fahs adapted from Langner's (1962) 22 Item Screening Device, which has been widely used as a screening test for psychiatric impairment and as a general measure of psychological health. The wording of the 15 selected items was simplified, and a four choice response, from "not at all" to "quite a lot", was substituted for a two choice "yes" and "no" response to a question about how often the specified feelings or complaints had happened during the past two weeks. The resulting measure, called "Self-Report" (See Appendix) or the Distress Scale, was administered to the same 166 project and nonproject students who took Things That Happen In School in December, 1985.

A varimax rotated factor analysis of all 166 students' responses to the Distress Scale yielded three fairly distinct factors, labeled by us Depression Symptoms, Psychosomatic Symptoms, and Illness Symptoms. The items loading at least .35 on each factor are shown in Table 8, in the order of the magnitude of their loading on the factor in quesion; the items are in parentheses if they loaded more strongly onanother factor.

The greatest variance among the students occurred around the first factor, Depression Symptoms. Table 9 reports the means, standard deviations, and intercorrelation of the Distress Scale and its three subscales. The overlapping items, restlessness and stomach aches, have been included only in the subscale on which they load the highest.

Illness Symptoms were reported most frequently (2.10) and Psychosomatic Symptoms least frequently (1.79 on a scale of 1 to 4). The frequency of Depression Symptoms (1.95) was intermediate between the other two factors. These means were virtually the same for the total sample and for the project students separately. When the boys and the girls are considered separately, the girls are found to have reported Illness Symptoms more frequently than the boys (2.23 vs. 2.01).

Depression Symptoms correlated .52 (p<.001) with Psychosomatic Symptoms, and Psychosomatic Symptoms correlated .48 (p<.001) with Illness Symptoms, but Depression Symptoms correlated only .34 (p<.001) with Illness Symptoms. This pattern was repeated within all of the subgroups comprising the sample: boys and girls, project and nonproject students, and the four combinations of these variables. What it suggests is a path of influence, depression affecting psychosomatic conditions, and the psychosomatic conditions in turn affecting the illness conditions. Of course, other variables not accounted for here would also influence the illness symptoms.

The Cronbach alpha for the Distress Scale total score is .84, which indicates a high internal consistency among the items overall, or high inter-item reliability.

Interrelationships of Subscales from Things That Happen In School

Complete forms were obtained from 159 students for both THIS and the Distress Scale. Of these students, 91 were boys and 68 were girls, and 90 were enrolled in the Project on Academic Striving while 69 were not in the project. The nonproject students were in the same official classes with project students, but many of them had transferred from another, closed-out school at the beginning of the semester and thus had not participated in project activities either in the present semester (for which the administration of these instruments was the first activity) or in previous semesters. The nonproject students appeared to be similar in age to the project students. However, they were concentrated more in the lower functioning classes than the project students, who were distributed in a range of classes from above to below grade level on the basis of reading test scores. The analysis which is reported here has been concerned to find out whether a given pattern is characteristic of all of the students' reponses to THIS and the Distress Scale, or whether it is more representative of just one or more of the subgroups. Accordingly, the tables contain correlations obtained for all of the following groups: all subjects, males, females, project students, nonproject students, male project students, female project students, male nonproject students, and female nonproject students.

Table 10 shows the intercorrelation of the four principal THIS subscales with one another and with the Distress Scale. Among THIS subscales themselves, there tend to be very clear patterns. Stressor Appraisal did not correlate significantly with Stressor Frequency for any of the groups. In other words, how strongly students said they reacted to stressor events when they happened was independent of how often the students perceived these events to be happening. This was also true for the project students who responded to the original AEI in Fall, 1983 (many of them the same students who were surveyed two years later in 1985), as it was for an independent school sample at that time (see Interim Report, 1985).

Stressor Appraisal did correlate significantly with Support Appraisal for all of the groups. Students who said they got upset when stressor events happened tended to say also that they felt good when support events happened. Conversely, students who were more indifferent to the stressor events tended also to be more indifferent to the support events, or at least to deny that they had strong reactions to these events. These patterns too obtained for both the project students surveyed two years before and the independent school sample.

Stressor Appraisal also correlated significantly with Support Frequency, but in this case only for those groups that included boys: all subjects, all boys, project students, nonproject students, and the project boys and nonproject boys. There was a tendency for these groups to report support events as happening more frequently if they said they reacted more negatively to stressor events when these events happened. This was also true of project boys compared to project girls in the 1983 survey.

Stressor Frequency did not correlate significantly with Support Appraisal for any group, as it also had not in 1983. Stressor Frequency correlated positively with Support Frequency for groups that included the project boys, but not for girls or any of the nonproject groups. In 1983, this correlation was found for both boys and girls in the project, but not for nonproject students.

For all of the groups except the project girls, Support Appraisal correlated significantly with Support Frequency, the students tending to see the support events occurring more frequently if they reacted more positively to them when they did occur. This was precisely the same pattern that was found among project and nonproject boys and girls in 1983.

In summary so far, there has been a strong trend in our research with THIS for students' appraisals of stressor events and support events to be correlated. There has been a consistent tendency for the students to estimate the frequency of the stressor events independently of their appraisal of them, but for most students there has been a tendency to perceive support events to be occurring more frequently if the appraisal of them is more positive. The association of the occurrence of support events with strong appraisals of stressor events has tended to be more characteristic of male subjects, but only project boys have consistently associated support events with the frequency of stressor events. As further data below will suggest, it may be that certain of the project boys associated with each other in groups that both gave support and generated stressor events.

Correlations of THIS Subscales with Distress

Distress, which was measured only in the 1985 survey, was independent of Stressor Appraisal for all groups in this survey except the nonproject girls; for this group there was a significant positive correlation between self-reported distress and strength of appraisal of stressor events.

Distress and Stressor Frequency were found to be highly interdependent for virtually all groups. Of the four primary subgroups, project and nonproject boys and girls respectively, only the project boys ($r=.28$, $p<.05$) showed a relatively low correlation, all of the other subgroups yielding a correlation of at least .55, significant at $p<.001$.

Distress and Support Appraisal were not related for any group. Distress was not significantly correlated with Support Frequency for the sample as a whole, but there was a significant correlation for one of the subgroups, the project girls ($r=.48$, $p<.01$), and some significance obtained in all of the groups--all students, female students, project students--that included the project girls.

Overall, the students' reporting of symptoms of distress tended to be much more closely linked with their perception of the frequency of stressor events than with the frequency of support events; it was independent of appraisal of stressor events for all but one subgroup, and independent of appraisal of support events for all subgroups.

Stressor Appraisal as a modifier of the relationship between Stressor Frequency and Distress

These findings are modified by the results of an analysis which asks a further question: How does the strength of a student's appraisal of stressor events influence the correlation between the frequency of the events and the distress score? Table 11 reports means and standard deviations of the four principal THIS subscales and Distress for three groups of boys and three groups of girls respectively: those with the highest Stressor Appraisal scores, those in a middle range of Stressor Appraisal scores, and those with the lowest Stressor Appraisal scores. In Table 12 we see that for the boys, a stronger Stressor Appraisal was associated with a higher correlation between Stressor Frequency and Distress. More specifically, for the boys whose Stressor Appraisal was in the top third of the distribution of total scores, the correlation between Stressor Frequency and Distress was .71 (p<.001); for the boys in the middle third of the Stressor Appraisal range, the correlation was .35 (p<.05); and for the boys in the lowest third of the range, the correlation was .22.

For the girls in both groups, a U shaped curve obtained. (See Table 12.) The correlations for both groups of girls together were .65 (p<.001) in the top third of the Stressor Appraisal range, .36 in the middle third of the range, and .66 (p<.001) in the bottom third of the range.

Interestingly, there was no significant difference between Stressor Frequency for any pair of these groups, nor were the Distress scores different for any pair of groups. For the boys, a strong Stressor Appraisal, and for the girls, both a strong and a weak Stressor Appraisal, was associated with a correlation between Stressor Frequency and Distress, without the actual levels of either of these variables being affected. (See Table 11.)

No such consistent pattern has been found for Support Appraisal in relation to Stressor Frequency and Distress for either the boys or the girls.

Correlations among Stressor Appraisal and Frequency dimensions and Distress Scale factors

The next analysis to be reported has examined the interrelationships among the Stressor Appraisal and Stressor Frequency dimensions (composed of factor items, as indicated in Table 3 above) and the Distress Scale factors. (See Table 13.) Only one relationship between a Stressor Appraisal dimension and a Stressor Frequency dimension or a Distress factor reached significance for the sample as a whole. Appraisal of Assaults on Safety and Integrity (Stressor Appraisal dimension #1) was negatively correlated with Frequency of Academic Trouble (r=-.23, p<.01) for all students; the correlation was significant and virtually the same for project and nonproject students separately (Table 13). This probably means both that it was the students who experienced fewer academic stressors who reacted more strongly to assaults on safety and integrity, and that reacting more strongly to these assaults contributed to the students' experiencing less academic trouble.

As shown in Table 13, all three dimensions of Stressor Frequency were positively and significantly related to all three dimensions of Distress for the sample as a whole. Each of the Stressor Frequency dimensions correlated most strongly with Depression Symptoms and least strongly with Illness Symptoms. This is reflected in the correlations between the Stressor Frequency whole score and the Distress factors: r=.47 (p<.001) for Depression Symptoms, r=.34 (p<.001) for Psychosomatic Symptoms, and r=.26 (p<.001) for Illness Symptoms. Looking at the relationships between the Distress Scale whole score and the separate Stressor Frequency dimensions, we find r=.27 (p<.001) for Academic Trouble, r=.34 (p<.001) for Physical Assaults, and r=.39 (p<.001) for General School Disruption. The magnitude of the correlations was not, then, simply a function of the number of items available for correlation in one dimension or another, given the fact that Academic Trouble has the most, and General School Disruption the fewest, items in the Stressor Frequency subscale. General School Disruption, then, was associated most strongly with Distress, Physical Assaults was associated next most strongly, and Academic Trouble was associated least strongly, though all of these associations were highly significant. The causal relationships could well be bi-directional, as, for example, students who were susceptible to distress might have been more sensitive to general school disruption, and, equally, students who perceived more general school disruption might have been more likely to experience distress. The finding reported earlier, that General School Disruption was the most frequently occurring category of stressors, adds to the import of these associations.

There were some deviations from these patterns for boys and girls separately. Specifically, for boys the correlation between Physical Assaults and Distress (r=.16) was the lowest for all three Stressor Frequency dimensions, and was not significant, whereas for girls the correlation was the highest of the three dimensions (r=.54, p<.001). For boys, the order in which the Distress subscales correlated with Stressor Frequency was Depression Symptoms (r=.40, p<.001), Illness Symptoms (r=.26, p<.01), and Psychosomatic Symptoms (r=.21, p<.05). For girls, the order was Depression Symptoms (r=.56, p<.001), Psychosomatic Symptoms (r=.53, p<.001), and Illness Symptoms (r=.24, p<.05). The lower association between Physical Assaults and Distress for the boys than for the girls might well reflect sex roles, as might indeed the lower association of Psychosomatic Symptoms with Stressor Frequency for boys than for girls. Interestingly, there was absolutely no difference in the level of frequency of Physical Assaults reported by the boys and girls (1.39 and 1.38 respectively, on a scale of 1 to 3), or in the level of Psychosomatic Symptoms reported by the boys and the girls (1.78 and 1.79 respectively, on a scale of 1 to 4). We might infer, then, that the boys experienced psychosomatic symptoms of distress as much as the girls, but could not or did not associate them as clearly with stressors in the school environment.

Correlations among Support Appraisal and Frequency dimensions and Distress Scale factors

Table 14 shows the correlations among the Support Appraisal and Support Frequency dimensions and Distress. In line with the previously reported finding that Support Appraisal and Support Frequency were correlated for all but one of the subgroups in the sample, there were many significant correlations between Support Appraisal and Support Frequency dimensions. These findings are consistent with the general phenomenon of tending to perceive what one values. The correlation was particularly high ($r=.36$, $p<.001$) between Appraisal of People Support (Support Appraisal dimension #1) and Frequency of Person Support (Support Frequency dimension #4), each of which contained three of the four (but not the same three) person support items added to THIS in the 1985 revision.

For the total sample, all of the correlations between Support Frequency dimensions and Distress factors were low, the highest being the correlation between Frequency of Help and Friendship and Depression Symptoms ($r=.17$, $p<.05$). (Table not shown.) This reflected especially the high association of these variables for the girls, for whom Frequency of Help and Friendship also correlated highly with Psychosomatic Symptoms and moderately with Illness Symptoms. The correlation of Frequency of Help and Friendship with the Distress Scale whole score was $r=.39$ ($p<.001$) for the girls, while for the boys it was $r=.00$! The likely interpretation of this is that the girls sought more help and comfort from others when they were in distress, or at least perceived themselves this way more than the boys. However, there was also a difference of almost the same magnitude between students who were in the project ($r=.29$, $p<.01$) and the nonproject students ($r=.01$). The association of Frequency of Help and Friendship with Distress was higher for project boys as well as for project girls, than for nonproject boys and nonproject girls. Once again, the levels of these measures were very similar among all the subgroups. Finally, the Support Frequency dimensions were all more highly correlated with Distress for the project students than for the nonproject students. This is not likely to represent a difference in sensitivity that could be attributed to personality, since personality per se would be more randomly distributed between these two samples. It might then indicate a project effect, that is, a learned or enculturated linking of distress with receiving and giving help and friendship. Non-project students experienced the same level of distress, but did not link it with perceived support as project students did.

Correlations among THIS dimension scores

The correlations among the Stressor Appraisal and Support Appraisal dimensions (table not shown) tended to be positive and highly significant, the exceptions occurring mainly in just one or another of the four primary subgroups, male or female project or nonproject students. The correlations among the Stressor Appraisal and Support Frequency dimensions also tended to be positive, but at a lower level of significance. These findings are in line with the whole score correlations that have already been reported.

For the sample as a whole, Frequency of Academic Trouble was negatively correlated with Appraisal of Encouragement ($r=-.24$, $p<.01$) and with Appraisal of Help and Friendship ($r=-.22$, $p<.01$). (See Table 14). However, these tendencies were stronger for girls than for boys, and for nonproject students than for project students. Frequency of Academic Trouble was positively correlated with Frequency of Help and Friendship ($r=.20$, $p<.01$), but in this case the tendency was stronger for boys than for girls, and for project students than for nonproject students. Girls, then, tended to have less frequent academic trouble if they appraised strongly (i. e., valued) encouragement and help and friendship, while boys tended to have less academic trouble if they experienced help and friendship less frequently. Frequency of Physical Assaults was positively correlated with Frequency of Help and Friendship ($r=.27$, $p<.001$), and this relationship held almost equally for all subgroups in the sample. Finally, Frequency of General School Disruption correlated positively with Frequency of Help and Friendship ($r=.22$, $p<.01$), but this relationship was stronger for boys than for girls in both the project and the nonproject subsamples. These positive relationships between Frequency of Help and Friendship and the several Stressor Frequency dimensions, especially for boys, could mean both that participating in help and friendship interactions led to stressor events, and that the experience of the stressor events led to the help and friendship events. Transactions in both directions were observed over the course of the project.

We have reported here a fairly exhaustive analysis of the interrelationships among the various THIS and Distress Scale dimension scores in order to take full advantage of the sample of both project and nonproject students who responded to these two instruments in Fall, 1985. In all of the remaining analyses to be reported, we are limited to just those students who had permission to participate in the project and for whom we thereby have been able to record grades and obtain scores on other project instruments.

CORRELATIONS OF DISTRESS, STRESSOR REACTION, STRESSOR FREQUENCY, SUPPORT REACTION, AND SUPPORT FREQUENCY WITH LOCUS OF CONTROL AND SELF-ESTEEM: SPRING AND FALL 1985 MEASURES

Instruments to measure locus of control and self esteem

Project students' locus of control was measured in Spring, 1985 using two instruments, the Nowicki-Strickland Children's Scale of Internal and External Control (Nowicki & Strickland, 1973), and the Connell Locus of Control Scale (Connell, 1984). The Nowicki-Strickland scale was designed for use with black children and youth. Scores range from 0 to 40, with higher scores denoting externality. Test-retest reliability has been reported to be .66 for 7th grade children (Nowicki & Strickland, 1973). Only four of the 40 items on the instrument relate directly to academic events, most of the items pertaining to physical and social events. Nevertheless, it has been found in previous research that externality correlates with lower academic achievement for children from grades 3 through 12 (Nowicki & Strickland, 1973). Individuals with a more external locus of control have also been found to be more at risk of high anxiety (Bethea, 1986).

The Connell Scale measures locus of control in four domains: cognitive, social, physical, and general. (See Appendix for copy of Connell Locus of Control Scale.) The "physical" locus of control items relate especially to sports or athletic prowess, as, for example, in "When I win at a sport, a lot of times I can't figure out why I won" and "I can be good at any sport if I try hard enough." It will be noticed that these items do have a social component. The social locus items themselves are more clearly distinguished from the physical, for example, "If somebody doesn't like me, it's usually because of something I did." An example of a cognitive item is, "If I have a bad teacher, I won't do well in school."

The Connell instrument has items to attribute control to the self, i. e. internal control, to powerful others, and to unknown forces, all illustrated above. The instrument also distinguishes between locus of control for success and locus of control for failure, again illustrated in the examples above.

In Chapter Three of this report, Bethea reports her in-depth analysis of the relationships between the Connell Locus of Control Scale and students' achievement and scores on the Hare Self-Esteem Scale. Bethea uses the data for all of the students included in the project in 1984-85, when the cohort was in the seventh grade. The present chapter focuses just on the cohort students, and employs the Connell data mainly to throw light on the relationship of locus of control to the experience of stress. For this analysis we use a composite score that in the light of Bethea's findings fails to exploit the distinction between powerful others and unknown forces as not-internal sources of control.

At the time we did the analysis reported here, Connell himself had not combined the subscales of his instrument to obtain more comprehensive locus of control scores. However, an inspection of correlations found between different subscores and other variables led Bethea and Grannis to construct various composite scores, to capitalize on consistency that is apparent in the correlations. The composite scores that Grannis has defined for the analysis to be reported here were obtained by adding powerful other responses, unknown responses, and the remainder of a constant minus internal responses (see formula below), to yield a total "not-internal" score. This was done for the success items and the failure items separately, in each of the four domains, cognitive, social, physical, and general locus of control.

not-internal score=powerful other responses + unknown responses + (k-internal responses)

Eight Connell composite not-internal scores were calculated, one in each of the four domains for success and failure events separately. For the total sample of 140 students (1984-85 seventh and eighth grade students) who completed both the Nowicki-Strickland and the Connell instruments in Spring, 1985, only three of these eight composite scores were significantly, though rather weakly, correlated with the Nowicki-Strickland externality score: social success ($r=.21$, $p<.01$), physical success ($r=.22$, $p<.01$), and general success ($r=.19$, $p<.05$). Thus the Nowicki-Strickland, at least for this sample, taps mainly locus of control for success, and not in the cognitive domain. Inspection of the Nowicki-Strickland items supports this conclusion, for most of the items do refer to success events, and only a few items refer to cognitive events. A more categorical difference between the Nowicki-Strickland

and the Connell instruments is that only the latter contains items explicitly representing unknown causes, as opposed to internal or external/powerful other causes. Both instruments have yielded correlations with other variables that are provocative from the standpoint of locus of control. Correlations for both instruments will be reported here to clarify which aspects of locus of control seem to come into play in different relationships.

Self-Esteem was measured with the Hare Self-Esteem Scale, the validity and reliability of which were discussed in the Interim Report. The Hare scale includes 10 items to measure Home Self-Esteem, another 10 for Peer Self-Esteem, and 10 for School Self-Esteem. A total or general Self-Esteem score is obtained by adding the scores for these subscales. Again, a more in-depth study of the Hare Self-Esteem Scale scores is presented in Bethea's chapter in this report.

The Nowicki-Strickland, Connell, and Hare instruments were all administered in the late winter and early spring of the 1984-85 school year, while the Distress Scale and Things That Happen in School (revised) were administered in the fall of the 1985-86 school year. (The Nowicki-Strickland and the Hare were also administered in prior years in the project, making possible a look at correlations between scores at different points in time.) Thus we are examining the relationships between distress and experience of stress and social support in the first term of the eighth grade, and locus of control and self-esteem in the second term of the seventh grade.

Comparison of means on locus of control and self-esteem.

Table 15 reports t-tests of the means of boys and girls in the cohort sample for various instrument scores. There were no significant differences between boys and girls on the Nowicki-Strickland in Spring 1985 (13.95 vs. 14.20) or on any of the Connell locus of control composite scores for success or failure events in the cognitive, social, or physical domains. Likewise, there were no significant differences between the boys and the girls on the Hare Self-Esteem total score or the subscores for Peer or School Self-Esteem. A difference on Home Self-Esteem approached significance (31.18 vs. 33.50, $p<.10$). The substantial differences between boys and girls in Stressor Appraisal and Support Appraisal, reported earlier, appear more important in light of there not being differences in locus of control or self-esteem. That there was not a difference in School Self-Esteem might be surprising in light of the boys having much lower grades than the girls, but not in view of there not being reading test or math test differences for boys and girls (to be reported below).

Correlations between locus of control and stress, support, and distress

Various correlations between the Nowicki-Strickland, the Connell locus of control for success scores, and other variables are reported in Tables 16, 17, and 18, for the total sample of students in the project in 1985-86, i.e. the cohort, and for the boys and the girls separately. Correlations with the locus of control for failure scores are reported in Tables 19, 20, and 21.

The Nowicki-Strickland had no relationship to Stressor Appraisal. None of the Connell success scales related significantly to Stressor Appraisal for the cohort as a whole, and only the cognitive success scale of the Connell approached significance, and then only for the girls considered separately (r=.-33, p<.10)). Social locus for failure correlated significantly with Stressor Appraisal for the total cohort (r=.29, p<.05), and for the boys (r=.40, p<.05); for the girls, the correlation was .22 (n.s.). General locus for failure approached significance with Stressor Appraisal for the total cohort (r=.22, p<.10), and was significant for the girls (r=.37, p<.05); for the boys, it was only .06. Locus of control for failure in the social domain seems, then, to have been most strongly related to Stressor Appraisal, but, strikingly, the relationship was positive, that is, students who were less internal in the social failure domain had the stronger Stressor Appraisal scores. For the girls, however, being less internal in the cognitive success domain was associated with weaker Stressor Appraisal scores.

The Nowicki-Strickland related significantly with Stressor Frequency for the boys (r=.34, p<.05) and very significantly for the girls (r=.63, p<.001); for the total cohort, the correlation was .48 (p<.001). For the boys, the not-internal Connell score for cognitive success correlated significantly with Stressor Frequency (r=.40, p<.05), while the corresponding score for physical success correlated very significantly with Stressor Frequency (r=.69, p<.001), and the score for general success correlated significantly (r=.36, p<.05). None of the Connell success scores, however, correlated significantly with Stressor Frequency for the girls. For the total cohort, locus for cognitive success was correlated weakly with Stressor Frequency (r=.22, p<.10) and locus for physical success was strongly correlated (r=.48, p<.001).

Not-internal Locus of control for social failure correlated significantly with Stressor Frequency for the total cohort (r=.34, p<.01) and for the boys (r=.50, p<.01), but only .13 for the girls. Locus for physical failure correlated significantly for the total cohort (r=.26, p<.05), for the boys (r=.33, p<.05), but for the girls the correlation was only .16. All of the significant correlations between a Connell composite subscale and Stressor Frequency, then, obtained only for boys when boys and girls were analyzed separately. In every case, the correlation of locus of control with Stressor Frequency was positive, that is, boys who were less internal reported greater frequencies of recent stressor events.

It is important that the locus of control for success subscales correlated more strongly with Stressor Frequency than did the locus for failure scales. On the other hand, it will be seen below that the locus of control for failure scales correlated more strongly with Distress than did the locus for success scores.

The Nowicki-Strickland correlated .20 with Distress (p<.05) for the total cohort, and the Connell physical success score correlated .24 (p<.05) with Distress for the total cohort, though in neither case was the relationship significant for the boys or the girls considered separately. By contrast, there were a number of significant correlations between the locus of control for failure scores and Distress. Not-internality for social failure correlated with Distress .44 (p<.001) for the cohort as a whole, .43 (p<.05) for the boys separately, and .46 (p<.05) for the girls separately. Not-internality for cognitive failure correlated with Distress .22 (p<.10) for the total cohort, .29 (p<.10) for the boys, and .14 for the girls. And the physical failure not-internality score correlated .47 (p<.001) for the whole sample, .32 (p<.10) for the boys, and .67 (p<.001) for the girls. It is clear that feeling that one does not have control over social failures was strongly associated with distress for both the boys and the girls, that not having control over physical failures was very strongly associated with distress for the girls, and that not having control over cognitive and physical failures was moderately associated with distress for the boys. It is as if the focus shifted from succeeding or not in obtaining desired outcomes, as with Stressor Frequency, to the felt consequences of failures, as in Distress.

Correlations between Stressor Frequency and Distress for students with relatively internal or external locus of control

All of the significant correlations between a locus of control score and Stressor Frequency or Distress were positive, which is to say that externality or not-internality was consistently associated with higher

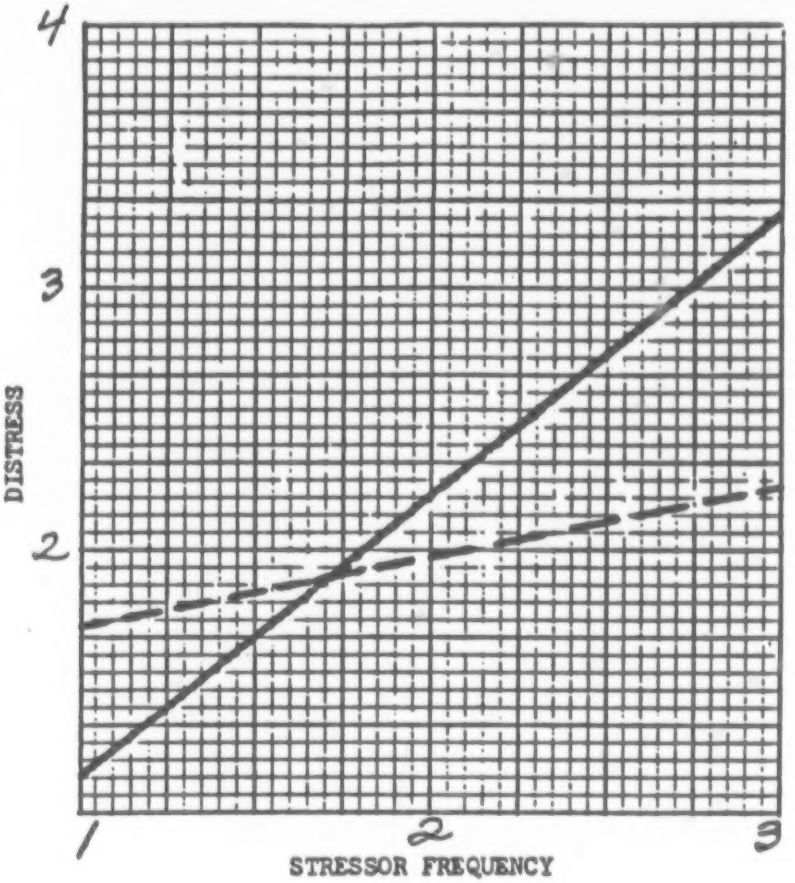
Stressor Frequency or Distress. The original proposal to the Grant Foundation for this research pointed out that students who were more external in locus of control might be more vulnerable to stressor events. This is already suggested in the correlations reported above, but a more powerful test can be conducted by examining the association between Stressor Frequency and Distress for students who were relatively more internal or external in locus of control. Table 23 shows that for 40 students whose Nowicki-Strickland externality score was less than or equal to 14 (mean score=10.7), the correlation between Stressor Frequency and Distress was only .09. For 34 students whose externality score was 15 or greater (mean score=17.9), the correlation between Stressor Frequency and Distress was .65 (p<.001). It appears that in this cohort, the experience of stressor events was much more likely to be associated with distress for students whose locus of control was more external than for those whose locus of control was more internal. (See Figure 1.) However, while the level of Stressor Frequency was significantly higher in the more external group (internals=1.56, externals=1.77, p<.01), the level of Distress was not significantly higher (internals=27.6, externals=29.7, n.s.). Nor were there differences between the means of any of the distress factor scores for the more external and more internal students. (Table 22). The findings that are under discussion here all apply to the boys and the girls separately as well as together.

Table 24 reports the results of a regression analysis that examined the contribution of Nowicki-Strickland Externality and Stressor Frequency, separately and in interaction, to the prediction of Distress. Externality explained only 4.0% (p<.10) of variance when it was entered first, but after Stressor Frequency, entered second, explained 17.6% (p<.001), the interaction of Externality with Stressor Frequency explained another 6.2% (p<.05). This is clear evidence that locus of control moderated the impact of stressor events on the cohort students' distress.

As we have concluded at earlier junctures in this analysis, what seems to be involved is not simply the objective frequency of certain events or feelings that different groups of students experience, but the associations among the events, or, one is tempted to say, the explanations that the students give for the events. One hypothesizes that the external students attribute their distress more to the stressor events, while the internals attribute it more to themselves. In focusing on attribution for distress itself, this hypothesis goes a step beyond saying that the externals attribute blame for stressor events to others, and also beyond saying that the internals take responsibility for (the avoidance of) stressor events themselves.

FIGURE 1

REGRESSION OF DISTRESS ON STRESSOR FREQUENCY
FOR STUDENTS WITH HIGH AND LOW NOWICKI-STRICKLAND SCORES



——————— = NOWICKI-STRICKLAND EXTERNALITY $>$14 (N=34)

r = .65 ($p < .001$)

--------------- = NOWICKI-STRICKLAND EXTERNALITY $\leq$14 (N=40)

r = .09 (n. s.)

Correlations between Stressor Frequency and Distress for students with relatively high or low Grade Point Average

In order to understand how the relationship between Stressor Frequency and Distress relates to the students' achievement, a similar analysis to the above has been done splitting the sample on grade point average instead of on locus of control (Tables 25, 26, and 27). For cohort students whose grade point average (see below for calculation) at the end of the second marking period in Fall, 1986 (GPA2P) was less than or equal to 70.1 (mean=61.5), the correlation of Stressor Frequency (omitting the academic performance items) with Distress was .20 ($p<.10$), while for students whose GPA2P was greater than 70.1 (mean=78.6), the correlation was .67 ($p<.001$).

The students with the lower grade point average reported significantly more stressor events than those with the higher grade point average, even though we are using a reduced Stressor Frequency score that does not include students' reporting they had received a low grade or a warning that they might fail. For the students with lower GPA2P, the mean was 1.72, while for the students with higher GPA2P it was 1.58 ($p<.05$). However, the students with the lower average did not report significantly more distress than those with the higher average (29.4 vs. 28.6). (Table 25).

These results for the sample as a whole mask different patterns for the boys and the girls. (Tables not shown.) For boys whose average was less than the mean for boys, the correlation between Stressor Frequency and Distress was -.06, while for the boys whose average was higher than the mean for boys, the correlation was .64 ($p<.001$). The boys whose average was lower reported significantly higher stressor frequencies (1.78 vs. 1.58, $p<.05$) and distress symptoms (30.7 vs. 26.7, $p<.10$). The difference in distress levels turns out to stem entirely from the third factor, Illness Symptoms; the boys with the lower grades averaged 2.3 on the scale of 1 to 4, while those with higher grades averaged 1.8 ($p<.01$). This is consistent with the expectation that higher illness symptoms would be correlated with higher absences, which figure strongly in the grades of the boys with the lower grade point averages.

For girls whose average was less than the mean for girls, the correlation between Stressor Frequency and Distress was .61 ($p<.001$), and for the girls whose average was higher than the mean for girls, it was .72 ($p<.001$). Stressor Frequency was significantly higher for the girls with the lower grades than for those with the higher grades (1.71

vs. 1.53, p<.10), but Distress was not different for these two groups (29.2 vs. 30.4), nor was the Illness Symptoms subscale of Distress different for the two groups (2.2 vs. 2.2).

From these last analyses, it can be seen that the correlation (.64) for the boys with the higher grade point average (76.0) resembled the correlation (.72) for the girls with the higher grade point average (80.9) and the correlation (.61) for the girls with the lower grade point average (68.1), contrasted with the correlation (-.06) for the boys with the lower grade point average (59.1). Boys for whom, like the girls, Stressor Frequency was associated with Distress, were likely to have grades more like the girls' grades, although Stressor Frequency itself was negatively correlated with grades.

Correlations between Stressor Frequency and Distress for students with relatively high or low Grade Point Average and relatively internal or external locus of control

In order to see the relationship between the correlations of Stressor Frequency and Distress that have thus far been found for Grade Point Average and locus of control separately, the correlations were examined for each combination of high and/or low scoring subjects. (Tables not shown.) It was those boys who were more external on the Nowicki-Strickland and who had higher grade point averages who were most likely to associate distress with stressor frequency (r=.89, p<.01). Conversely, boys who were more internal and who had lower grade point averages had a negative correlation between Stressor Frequency and Distress (r=-.35, n.s.), the direction of which approaches a denial of the relationship. High positive correlations obtained for girls who were more external, whether they had higher (r=.86, p<.01) or lower (r=.81, p<.01) grade point averages. Perhaps some of the more external students were more wary of stressors, though some might be said simply to have been overwhelmed by stressor events. This would be consistent with the parallel interpretation of Stressor Appraisal as appraisal, and would help explicate the function of the fact, as shown before, that students with a stronger Stressor Appraisal, especially the boys, also had a higher correlation between Stressor Frequency and Distress. Perhaps both valencing something very negatively and feeling little control over its occurrence results in particularly high distress when the event actually occurs. Finally, the Nowicki-Strickland score and Stressor Appraisal were quite independent of each other, so that each seems to represent a different avenue by which Stressor Frequency and Distress became correlated with each other and this correlation in turn was associated with the students' grades. To put it differently, externality and strong Stressor Appraisal both appear to be aspects of students' sensitivity to stressor events. In some cases, represented here by those students who had higher grade point averages, this sensitivity may perform the positive function of alerting the student to the potential dangers of stressor events. In other cases, represented by students with low grade point averages, we would speak more of vulnerability than of sensitivity, to emphasize the negative function of, particularly, external locus of control.

Correlations between self-esteem and stress, support, distress, and locus of control measures

Tables 28, 29, and 30 report correlations between Self-Esteem, THIS stress and support subscale measures, and the Nowicki-Strickland and Connell locus of control for success measures. Self-Esteem did not relate to Stressor Appraisal either for the total cohort or for the boys or the girls separately. Self-Esteem did relate significantly to Stressor Frequency, for the total cohort (r=-.27, p<.01), for the boys (r=-.26, p<.05), and for the girls (r=-.26, p<.10). Self-Esteem related significantly to Distress only for the girls (r=-.31, p<.05). Self-Esteem did not correlate significantly with Nowicki-Strickland for any group. However, it did correlate significantly with the not-internal score for cognitive success, for the total group (r=-.29, p<.05) and for the boys (r=-.37, p<.05). Self-Esteem also correlated significantly with not-internal for physical success, for the total group (r=-.40, p<.01), for the boys (r=-.43, p<.05), and for the girls (r=.-38, p<.05). Locus for physical success thus emerges again as particularly central to how the students feel about themselves, with the less internal students, especially in the physical domain, reporting lower Self-Esteem.

In another, parallel analysis, locus of control for social failure had the strongest correlation of the Connell failure subscales with Self-Esteem (r=-.33, p<.05). The correlation was greater for the boys (r=-.42, p<.05) than for the girls (r=-.25, n.s.). The subscale of the Hare that entered most strongly into this was School Self-Esteem, which correlated significantly with locus for social failure for the total group (r=-.43, p<.001), for the boys (r=-.46, p<.05), and for the girls (r=-.46, p<.05). (Tables not shown.)

In this sample of project students alone, as opposed to the larger sample that also included students not in the project, Support Appraisal had no relationship to Support Frequency. Support Appraisal correlated negatively with cognitive locus in the total cohort and for the girls alone. It correlated negatively with social locus for the girls alone. In both cases, stronger Support Appraisal was associated with greater internality of locus of control. Support Appraisal, however, also correlated negatively with Self-Esteem for the total cohort and for the girls alone. This is unexpected, since, as reported above, Self-Esteem was associated with greater internality of locus of control. Some other aspect of high Self-Esteem, one infers, restrained students, or at least girls, from saying they felt very good when support events happened.

Correlations between availability of support persons and stress, distress, and locus of control

It will be recalled that THIS contains four social support items that assess how available support has been from a family sibling (hereafter called a home peer), a school peer, a school adult, and a family adult, during the week prior to completing THIS. Tables 31, 32, and 33 report correlations between these availability items, Stressor Appraisal and Frequency, and Distress, for the total cohort and the boys and girls separately.

The correlation between home peer support and Stressor Appraisal was significant for the total cohort ($r=.31$, $p<.01$) and for the girls ($r=.34$, $p<.05$). The correlation between school peer support and Stressor Appraisal was less significant for the total group ($r=.24$, $p<.05$) and tended toward significance for the boys ($r=.20$, $p<.10$). In both of these sets of correlations, greater availability of support was associated with stronger Stressor Appraisal. Home and school peer support have been summed to yield a more general Peer Support scale, and this correlated significantly with Stressor Appraisal for the total cohort ($r=.35$, $p<.001$), for the boys ($r=.27$, $p<.05$), and for the girls ($r=.34$, $p<.05$).

Stressor Frequency correlated significantly with school peer support for the total cohort ($r=.21$, $p<.05$) and for the boys ($r=.36$, $p<.01$). It also correlated significantly with school adult support for the total cohort ($r=.18$, $p<.05$) and for the boys ($r=.28$, $p<.05$). School peer and adult support have been summed to yield a total School Support scale, and this correlated with Stressor Frequency .24 ($p<.05$) for the total group, .38 ($p<.01$) for the boys, but only .08 (n.s.) for the girls. Distress correlated significantly with home peer support for the total cohort ($r=.20$, $p<.05$), with school peer support for the total cohort ($r=.22$, $p<.05$), and with school peer support for the boys ($r=.32$, $p<.01$). The correlation of Distress with Peer Support was .27 for the total group ($p<.01$), .30 ($p<.05$) for the boys, but .20 (n.s.) for the girls. The correlation of Distress with School Support was .24 ($p<.01$) for the total cohort, .29 ($p<.05$) for the boys, but .15 (n.s.) for the girls.

Finally, for the girls the correlation between Distress and Home Support, the sum of home adult and peer support, was .30 (p<.05), though it was .11 (n.s.) for the boys; for the total sample, it was .20 (p<.05).

All of these positive correlations between availability of support and Distress and Stressor Frequency are, of course, very unexpected. They raise various questions, including the meaning of the availability items, or the function of availability. There was no relationship between stressor events or distress symptoms and the total frequency of support events for the boys, but the boys who reported more frequent stressor events or distress symptoms said more often that peers were available to them for support. The presence of peers that a boy could count on for help was not associated with the specific support events detailed in THIS as much as with upsetting events! The support the boys received, then, may have taken more the form of co-involvement in stressor events than positive actions to mitigate those events. For the girls, there was a more conventional consistency. Distress was strongly correlated with total Support Frequency (r=.48, p<.01), and mildly correlated with the availability of peer and adult support in the home. The girls, then, might be receiving more support in conjunction with distress, especially from persons in the home.

Tables 34, 35, and 36 report correlations between the THIS support availability items and the Connell locus of control for success and failure subscales. All of the significant correlations between Connell not-internal control for success scales and support availability items were negative. This included negative correlations for the total group between locus for cognitive success and home peer presence (r=-.27, p<.05) and school adult presence (r=-.26, p<.05), between social locus and school adult presence (r=-.23, p<.05), school peer presence (r=.-.26, p<.05), and home adult presence (r=-.23, p<.10), and between physical locus and home peer presence (r=-.31, p<.05). In terms of the composite scales, locus for cognitive success correlated significantly with peer support (r=-.28, p<.05) and with school support (-.26, p<.05), while locus for social success correlated with adult support (r=-29, p<.05), peer support (r=-.27, p<.05), home support (r=-.25, p<.05) and school support (r=-.29, p<.05). Not-internality for success was consistently associated with having less access to someone at home or at school who could be supportive. For the boys, the strongest relationships obtained between adult support and locus for cognitive and social success, while for the girls, the strongest relationships obtained between peer support and locus for cognitive and social success. Peer and adult support, then, had different implications for the boys vis-a-vis locus of control and experience of upsetting events. They also functioned differently for the girls, but not resulting in the same patterns vis-a-vis locus of control and experience of upsetting events.

Locus of control for failure in the cognitive domain also correlated negatively with home peer presence (r=-.23, p<.05). However, locus of control for failure in the physical domain was positively correlated with home adult presence (r=.25, p<.05). For boys alone, home peer presence was negatively correlated with locus for cognitive failure (-.43, p<.05), but school peer presence was positively correlated with both locus for social failure (r=.35, p<.05) and locus for physical failure (r=.40, p<.05). For the girls separately, locus for physical failure was positively associated with availability of home adult support (r=.39, p<.05). In terms of the composite support scores, locus for physical failure was positively associated with home support for the boys and girls together (r=.24, p<.05), with peer support for the boys separately (r=.34, p<.05), and with home support for the girls separately (r=.36, p<.05). In all of these cases concerning failure in the social or the physical domain, availability of support was associated with not blaming one's self for failure. As availability of support was seen above to be associated with taking responsibility for successes, availability seems to be a key to the students' attributions. Again, however, its relationship to stress and distress, especially for the boys, remains problematic.

THE RELATIONSHIP OF STRESS TO ACADEMIC ACHIEVEMENT

Academic achievement in the eighth grade, 1985-86

For project students, a grade point average has been calculated on the basis of grades in the four major subjects that all students were programmed for, language arts, mathematics, science, and social studies. This was done for each of the four grading periods in 1985-86, September to November (GPA1P), November to January (GPA2P), February to April (GPA3P), and April to June (GPA4P). In cases where a student was given a grade of "Absent" instead of a number grade, but the student had attended school at least sporadically throughout the grading period, a grade of 55 was assigned to the course in question.

The California Achievement Tests in Reading and Mathematics were administered by the school in Spring, 1985, as they had been in Spring, 1984. In 1984, when the cohort was in the sixth grade, 79 students in the cohort took the reading test; in 1985, 79 of the students took the test; the number of students who took the test in either one year or the other was 86. In order to be able to include the largest number of students in regression analyses with reading test scores, a composite score was determined for each subject using the average of the 1984 and 1985 scores, or the 1984 or 1985 score separately if only one or the other was available; this calculation adjusted the 1984 scores to be equivalent to the 1985 scores. The same procedure was used to obtain a composite score for the 1984 and 1985 mathematics achievement test scores. In 1984, 79 students in the cohort took the math test, while in 1985, 61 students took the test; the number of students who took the test in either one year or the other was 84.

Table 37 displays the grade point averages for each of the four marking periods in 1985-86, for the total sample of project students who were active in the school during the marking period in question, and for boys and girls separately. The students' composite scores on the reading and mathematics achievement tests are also shown in Table 37. Table 38 gives the percentage of students who were awarded 1, 2, 3 or 4 passing grades of 65 or higher in the four major subjects at midyear and for the whole year, that is, at the end of the second and fourth marking periods.

The composite reading test score average for the whole cohort was 8.0; for the boys it was 8.1, and for the girls it was 7.7. This would mean that the cohort as a whole was several months ahead of the expected reading level, 7.7, at the time of taking the test(s), a figure that reflects what appears to have been a systematic overestimation of the cohort's reading scores in the 1985 testing. (The reasons for the high test scores were a matter of considerable speculation in the school when the results first became known.) The composite mathematics test score average for the whole cohort was 7.0; for the boys it was 7.0 and for the girls it was 7.1. These averages indicate that the cohort was generally about half a year behind the expected mathematics level at the time of taking the test(s).

The project students were, on the average, a half a year older than expected for their grade, reflecting the fact that about a third of them had been retained a year or more in grade during elementary school.

The fourth period grades were treated as the students' final grades in the school records. As graduation was determined by the final grades, they reflected not just a student's performance in whatever period the grader chose to emphasize, but other factors affecting the school's decision to promote or retain the student, for example, age. For this reason, the midyear grade point average (GPA2P) has been used in various analyses that examine the correlation between grades and other measures. A midyear grade point average of the four main subjects was also used in the Progress Report (Grannis & Fahs, 1985), for analyses pertaining to 1983-84 grades.

The grade point averages at the end of the second marking period, that is, in the middle of the eighth grade, were 67.1 for the boys, 73.8 for the girls, and 69.9 for the whole cohort. These might be thought to be very low grades for students who were within half a year of being on grade level in reading and mathematics, even allowing for many of the students being over age for their grade. Furthermore, the boys' grades were substantially below the girls', although the boys' and girls' reading and math test scores were virtually the same. The grades underscore the question of whether and in what way stressor events contributed to the students' low academic achievement.

The potential for stress in the school is suggested even more by the percentages of students who received failing grades for one or more of their major subjects. At midyear, 47% of all the students--61% of the boys and 26% of the girls--received a grade below passing in one or more of their subjects. At the end of the year, even with the pressure to pass students on to high school, 30% of the 90 students who were still in the school-- 38% of the boys and 18% of the girls--received a grade below passing. (Table 38)

Correlations of Stressor Appraisal, Stressor Frequency, Support Appraisal, and Support Frequency with Grade Point Average

From Tables 39, 40, and 41 it can be seen that the correlation of Stressor Appraisal with the Second Period Grade Point Average (GPA2P) was .25 ($p<.01$) for the cohort as a whole. It was .25 ($p<.05$) for the boys, but -.00 (n.s.) for the girls.

The correlation of Stressor Appraisal with the First Period Grade Point Average (GPA1P) was .36 ($p<.001$) for the cohort, .32 ($p<.01$) for the boys, and .10 (n.s.) for the girls. As these grades were received a few weeks before THIS was administered, they might be influencing the THIS responses. We consider this unlikely from the standpoint of the content of most of the THIS items. Further, it might be argued that behavior matters most to grades in the early months, and that reading and mathematics skills enter more directly into the determination of grades as the year progresses. However, we will report only the more conservative analyses with GPA2P in the remainder of this section.

These data reflect the fact that the girls generally tended to react more strongly to the stressor events than the boys, and to have a higher grade point average than the boys. Thus the correlation between Stressor Appraisal and GPA2P is as high for the total group as it is for the boys alone, even though these measures do not correlate among the girls alone. It was those boys who appraised the stressor events as strongly as the girls who were more likely to be graded on a level with the girls--a pattern that will become clearer later in this report.

The tables also show the correlations for the Stressor Appraisal dimension scores. The first dimension, Reaction to Assaults on Safety and Integrity (STRA5D1), had the strongest correlation with GPA2P ($r=.33$, $p<.001$), while the second strongest obtained for Reaction to Academic Troubles (STRA5D2) ($r=.19$, $p<.05$). These correlations indicate that the students' reactions to physical and social stressors in the school and classroom environment were actually more important to their academic success than their reaction to explicitly academic stressors.

The correlation of GPA2P with the total Stressor Frequency score (STREF5T) was -.28 ($p<.01$) for the total cohort, -.31 ($p<.05$) for the boys, and -.17 ($p<.10$) for the girls. The correlation with Frequency of Academic Troubles (STFR5D1) was -.52 ($p<.001$) for the cohort as a whole, -.52 ($p<.001$) for the boys, and -.45 ($p<.01$) for the girls. This dimension includes a couple of items that are bound to correlate strongly with grade point average: 'I was warned that I might not pass a subject or pass to the next grade,' and 'I did worse on a test than I should have.' In order not to contaminate the correlation with GPA, an abbreviated version of the dimension (STFR5DZ) has been constituted from just the following four items:' I could not finish my work in class,' 'I didn't have a pen or paper or my book to do my work in class,' 'Someone tried to pressure me to cut class,' and 'I or one of my friends was moved to a different class.' The correlation of this abbreviated academic troubles dimension with GPA2P was -.46 (p<.001) for the total cohort, -.43 (p<.001) for the boys, and -.44 (p<.01) for the girls. The frequency reported by the boys was 1.57, which approached being significantly higher (p<.10) than the 1.41 reported by the girls.

The Physical Assaults dimension of Stressor Frequency (STFR5D2) correlated with GPA2P -.18 (p<.05) for the total group, -.37 (p<.01) for the boys, and .11 (n.s.) for the girls. The mean dimension score was nearly the same for the boys (1.40) and the girls (1.35), so it must be inferred that a given assault had more impact on a boy's grades, or a boy who had lower grades got more involved with assaults than a boy with higher grades, or perceived assaults to be happening more often. This is consistent with a finding to be reported below, that teachers' ratings of students' behavior correlated highly with the students' grades, and that the teachers rated boys, on the average, more negatively on classroom behavior than girls.

General School Disruption, the third Stressor Frequency dimension (STFR5D3), correlated .14 (p<.10) with GPA2P for the total group, only .05 (n.s.) for the boys, but .30 (p<.05) for the girls. Here it is the perception of the stressor events happening more often that is correlated with higher grade point average. Again, the boys and the girls agree on the actual frequency of these events, the average levels being 2.00 and 1.99 respectively. Since it is the girls who are reporting more of these events whose averages are higher, it must be that the recognition of the events in some way favors their grades. The events this dimension includes that are most likely to impact directly on grades are "People in the hall were bothering the classroom" and "People in the classroom wouldn't get quiet."

The correlation of the Support Appraisal whole score (SUPAP5T) with GPA2P was .04 for the whole cohort, -.07 for the boys, and .02 for the girls, not significant in any case. For the boys, there was a trend toward significant correlation with GPA2P for just one of the three Support Appraisal dimension scores, Encouragement (SUPA5D3) (r=-.21, p<.10). The boys who said that the events in question made them feel less good tended to receive higher grades. For the girls, none of these correlations approached significance.

The correlation of the Support Frequency whole score with GPA2P was .12 for the whole cohort, .12 for the boys, and .02 for the girls, in each case not significant. None of the correlations of the Support Frequency dimensions with GPA2P reached significance for the total group or the boys or the girls separately.

Correlations of Stressor Appraisal, Stressor Frequency, Support Appraisal, and Support Frequency with Reading and Mathematics Test Score

As shown in Table 39, the correlations between the Stressor Appraisal and Frequency total scales or subscales and reading test score for the total cohort were generally in the same direction but weaker than the correlations between these subscales and GPA2P. The most striking instance of this is the lower correlation of Reading with Frequency of Academic Troubles, which was only -.18 for the total group, and -.08 for the boys, though it was -.38 (p<.01) for the girls. The lesser validity of the reading test scores in one year for the boys might be entering into this, but the correlations may also show that reading was less of a factor determining the occurrence of academic troubles for the boys than for the girls.

None of the changes of correlation between GPA2P or Reading and the Support Appraisal and Frequency whole scores and subscores is strong enough to warrant comment.

Table 40 shows that the correlations between the THIS subscales and reading test score were generally low for the boys, except in the case of the Stressor Appraisal whole score (r=.29, p<.05) and two of the composite appraisal dimension scores, Assaults on Safety and Integrity (r=.33, p<.01), and Disruption of Classwork (r=.27, p<.05). Boys who scored higher on reading tests tended to appraise these events as more upsetting. The correlations between reading and Stressor Frequency or its subscales tended to be low for the boys, though the Physical Assaults dimension, interestingly, correlated -.24 (p<.05) with reading for the boys. Boys who were relatively poor readers were the targets, and perhaps also the agents, of more physical assaults than better readers. To the extent that it is the latter, the boys' frustration at not being able to read might be a factor.

From Table 41 one sees that the general profile of correlations between reading test score and THIS subscales for the girls mirrors the profile of the correlations with GPA2, with some movement in one direction or the other. The strongest shifts involved Reaction to Physical Attacks (STRA5D3), which increased in correlation with Reading to -.35 (p<.05), and Frequency of General School Disruption, which decreased in correlation (relative to the boys).

The mathematics test scores are also included in the correlations reported in Tables 39 to 41. Considering first the whole group, what is striking first of all is that mathematics test score correlated much more highly than reading test with grade point average, the correlation for math being .63 (p<.001), while for reading it was .37 (p<.001). For the boys alone, reading correlated with GPA2P .35 (p<.01)), while mathematics correlates .61 (p<.001). For the girls, reading correlated .60 (p<.001) with GPA2P, and mathematics correlated .77 (p<.001). One can say that reading skill, but not mathematics, was having less influence on the boys' grades than it would be expected to have. Math also correlated more highly than reading with Stressor Frequency, especially the Frequency of Academic Troubles dimension (r=-.35, p<.001), for both the boys (r=-.26, p<.05) and the girls (r=-.45, p<.01). Finally, math related negatively to Reaction to Encouragement, especially for the boys (r=-.35, p<.01). These patterns will be examined further in the regression analyses to follow.

Regression of THIS Subscores on GPA2P

A series of regression analyses have been carried out to test successively more specific hypotheses about the relationship of THIS scores to students' grades. The first analyses replicated ones that were included in the Interim Report (Grannis & Fahs, 1985), but with only partly similar results. The second analyses used the subscale dimension scores that have been developed subsequently. In the third set of analyses, subscale scores were combined with locus of control scores to find out how these variables influence grade point average together. The analyses were carried out controlling on reading and mathematics test scores separately. A selection of the analyses will be presented in an order that raises particularly interesting questions.

Regression of GPA2P on THIS subscales identical with AEI subscales used in the 1985 Interim Report, controlling for reading

In the Interim Report, the various analyses presented used Stressor Reaction (now Appraisal), Stressor Frequency, Support Reaction (now Appraisal), and Support Frequency scores that included all of the subscale items except those few that referred explicitly to academic successes or failures. Thus, of the 18 Stressor Frequency items, all but two--"I did worse on a test than I should have," and "I was warned that I might not pass a test or pass to the next grade"--were included in the Stressor Frequency subscale. The resulting scales included 16 items for Stressor Reaction, 16 items for Stressor Frequency, 15 items for Support Reaction, and 15 items for Support Frequency. All of these items have been retained in the revised or expanded AEI that is THIS, and so our first analysis uses these items to create THIS subscales for comparison to the earlier results.

The samples for the analyses for the Interim Report and this Final Report were overlapping but not identical. The 1983-84 sample included both sixth and seventh graders. In 1985-86, these seventh graders had mostly left the school, and new students had been added to the sixth grade cohort, which was now in the eighth grade. About half of the students included in the sample of 86 subjects for the THIS analysis had been included in the sample of 80 subjects for the AEI analysis. On account of these differences, we will not attempt to make exact comparisons here. The means, standard deviations, and correlations of the variables for replication of the earlier analysis of regression for the 1985-86 cohort sample are given in Tables 42, 43, and 44, for the total sample, the boys, and the girls respectively. We note from comparing Table 11 in the Interim Report with Table 42 in this Final Report that mid-year grade point average was lower in 1985-86 than in 1983-84, that reading test average was a shade above expected grade level in both years, and that the corresponding AEI and THIS subscale scores were not significantly different between these two times--these comparisons applying to the total samples at the two times. On examining the data for the boys separately (Table 43 compared with Table 11 again), we see that the general pattern for grades and reading test scores still holds, but that there is a trend for Stressor Appraisal in 1985-86 to be lower than (Stressor Reaction) in 1983-84, Stressor Frequency to be lower in 1985-86, and Support Appraisal to be lower, while Support Frequency was slightly, though not significantly, higher for the 1985 sample than for 1983. For the girls (Table 44 and Table 11), again the general pattern of grades and test scores holds, but Stressor Appraisal stayed the same as Stressor Reaction and Support Appraisal actually increased over Support Reaction; there was a trend for Stressor Frequency to decrease, while Support Frequency stayed the same between the two samples. These data are consistent with the findings reported earlier (Tables 4 and 6)), notably that the Stressor Appraisal and Support Appraisal scores decreased between sixth and eighth grades for the boys while they stayed the same for the girls.

Tables 42 to 44 also show the intercorrelations of the variables in the analysis for the eighth grade sample. Table 45 displays the results of the regression of GPA2P for 1985-86 on the eighth grade THIS comparison subscales, after removing the variance accounted for by the composite sixth and seventh grade reading test scores. For the total group, reading accounted for 13.9% (p<.001) of the variance of grade point average, and Stressor Appraisal accounted for an additional 5.9% (p<.05), but no other variable explained a significant proportion of variance. When the boys were analyzed separately, reading accounted for 12.4% of variance (p<.05), but the only THIS variable to approach significance was Support Appraisal (p<.10). Consistent with findings reported earlier in the section on correlations, Support Appraisal actually contributed negatively to the boys' grade point average, those boys who appraised support events more positively being likely to receive lower grades than the boys who appraised them less positively. When the girls were analyzed separately, reading explained 35.6% of the variance of grade point average, but no THIS variable even began to approach significance.

Defining THIS predictor subscales

The stressor and support appraisal scores had both contributed positively and significantly to boys' grade point average in 1983-84 (though not to girls'), i.e., when the cohort boys were in the sixth grade. It does appear, then, that the overall reduction in strength of the boys' appraisals in 1985-86 is linked with a general weakening of the protective functioning of appraisal. However, the correlations of the 1985-86 THIS factor scores with grade point average (Tables 39 TO 41) did show that certain subscales of THIS were strongly related to GPA2P. In the analyses that follow, therefore, we have employed these subscales. Specifically, we have created a predictor subscale for Stressor Appraisal (STRA8PR) by combining the items for the dimensions called "Assaults on Safety and Integrity" and "Academic Trouble;" and we have created a predictor subscale for Stressor Frequency (STRF8PR) by combining the items for "Physical and Material Assaults" and "Academic Trouble" (minus the achievement items). For Support Appraisal we have simply used the "People Support" dimension items, and for Support Frequency we have used the "Person Support" dimension items--these dimensions (labeled SUPA8PR and SUPF8PR in the tables that follow) including the items on support from adults at home, peers at home, and peers at school that did show some trends with GPA2P for the boys and might be of particular interest. Various patterns in the data have led us to construct a term for the interaction between the Stressor Appraisal predictor subscale and reading test score (STRARDP), and a parallel term for the interaction with mathematics test score (STRAMTP), in order to find out if ability functions differently for students with relatively high or low Stressor Appraisal.

Regression of THIS predictor subscales and Reading on GPA2P

Tables 46 to 48 display the means and intercorrelations of the predictor variables with reading and GPA2P for the total sample and for boys and girls separately, and Table 49 shows the results of the regression analyses. The analysis uses a stepwise method that simply looks for the best combination of predictor variables, rather than a method that forces every variable in. (This latter method is used when the analysis is intended more to test a hypothesis than to discover the optimal prediction formula.)

For the total group (Table 49), the interaction of reading test score with the Stressor Appraisal predictor emerges as the first term predicting grade point average. STRARDP accounts for 18.7% of the variance of GPA2P ($p<.001$). The Stressor Frequency predictor (STRF8PR) appears on the second step, accounting for an additional 7.3% of variance ($p<.01$). No other variable reaches significance after these have been entered. Analyzing for the boys separately, the Stressor Frequency predictor is found at the first step (19.6%, $p<.01$), STRARDP at the second step (6.8%, $p<.05$), and the Support Frequency predictor (SUPF8PR) at the third step (9.3%, $p<.05$). The correlation of STRARDP with GPA2P is positive, reflecting the fact that the separate correlations of both STRA8PR and READ67 with GPA2P are positive. The correlations of both STRF8PR and SUPF8PR with GPA2P are negative. When we analyze separately for the girls, only reading test score contributes significant variance (35.6%, $p<.001$) to the prediction of grade point average.

Regression of THIS predictor subscales and mathematics on GPA2P

Tables 50 to 52 display the means and intercorrelations of the predictor variables with mathematics and GPA2P for the total sample and for boys and girls separately, while Table 53 shows the results of the regression analyses. Again the interaction term, in this case the interaction of mathematics test score with the Stressor Appraisal predictor (STRAMTP), is found at step one, but this time the Support Frequency predictor appears at the second step. STRAMTP explains 43.1% of the variance of GPA2P ($p<.001$), and

SUPF8PR explains an additional 3.1% ($p<.05$). What has happened here is that the original correlation of STRF8PR with GPA2P, $r=-.39$, has been reduced to a partial correlation of $-.23$ because STRF8PR is also correlated $-.36$ with STRAMTP, variance for which has been removed at the first step. The correlation of SUPF8PR has increased, on the other hand, after STRAMTP has been entered.

For the boys separately, the straight mathematics test score correlates highest with grade point average, and the Stressor Frequency predictor emerges at the second step. MATH67 accounts for 38.0% of GPA2P for the boys ($p<.001$), and STRF8PR accounts for an additional 7.7% ($p<.05$). Finally, for the girls, only MATH67 explains significant variance (61.0%, $p<.001$).

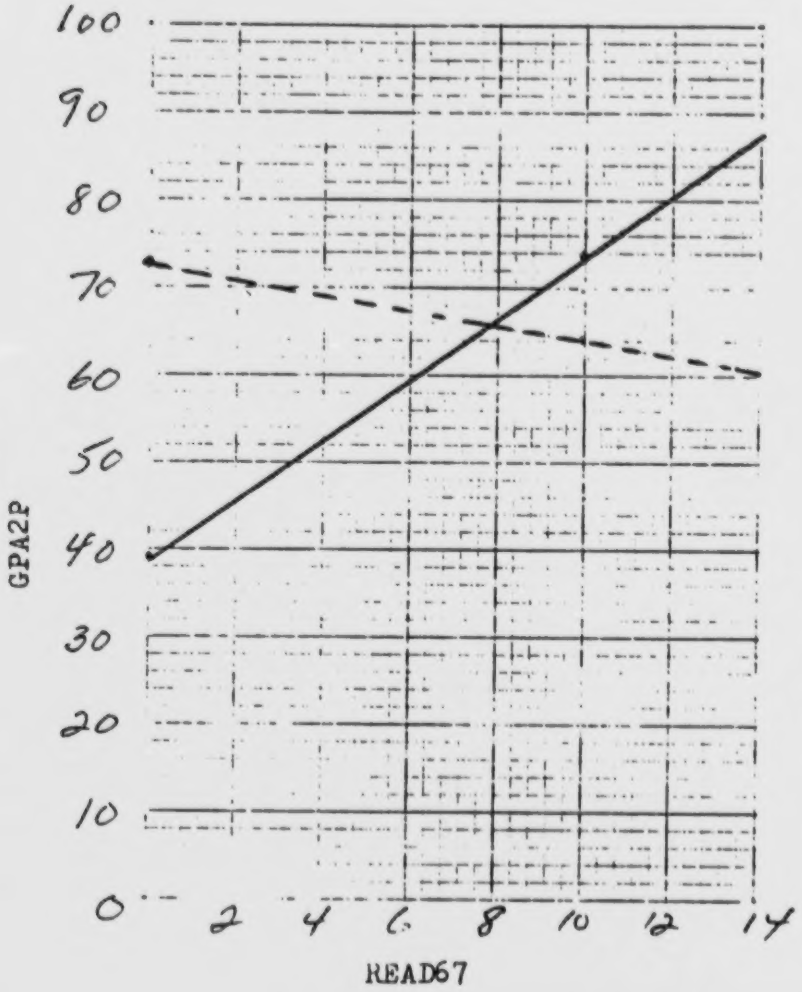
Correlation of Grade Point Average with Reading or Mathematics test score for students with higher or lower Stressor Appraisal

Mathematics is decidedly a stronger predictor of grade point average than reading for the project students in eighth grade, a finding that also obtained for the sample when the cohort was in the sixth grade (Grannis & Fahs, 1985). This is an arresting discovery, given the fact that researchers and the public generally pay much more attention to reading test scores. On the other hand, our observations have not noticed that mathematics skills as such come into play nearly as often in the four subjects averaged for GPA2P as do reading skills. We speculate, therefore, that a more general skill or attitude is reflected in mathematics competency for these students. It is not Stressor Appraisal as such, which actually does not correlate with mathematics test score as well as it does with reading. However, the different functioning of mathematics in relation to Stressor Appraisal, compared with reading in relation to Stressor Appraisal, might be involved. This can be seen from a scattergram analysis that displays the correlation between reading test score and grade point average, and again between mathematics test score and grade point average, for students who are in the upper half or the lower half of the sample on the Stressor Appraisal predictor score.

Figure 2 shows that for the boys for whom STRA8PR was less than or equal to 3.53, the correlation between READ67 and GPA2P was $-.14$ (n.s.), while for boys whose STRA8PR was greater than 3.53, the correlation was .54 ($p<.01$). For boys whose reaction to assaults and academic difficulties was more indifferent, reading score did not enter into grade point average. This particularly applied to the boys with high reading test scores, who only obtained high grade point averages if they also had high stressor reactions. The

Figure 2

Regression of Grade Point Average on Reading Test Score for Boys with High and Low Stressor Appraisal Scores



--------------- = Stressor Appraisal ≤ 3.53 (n=24)

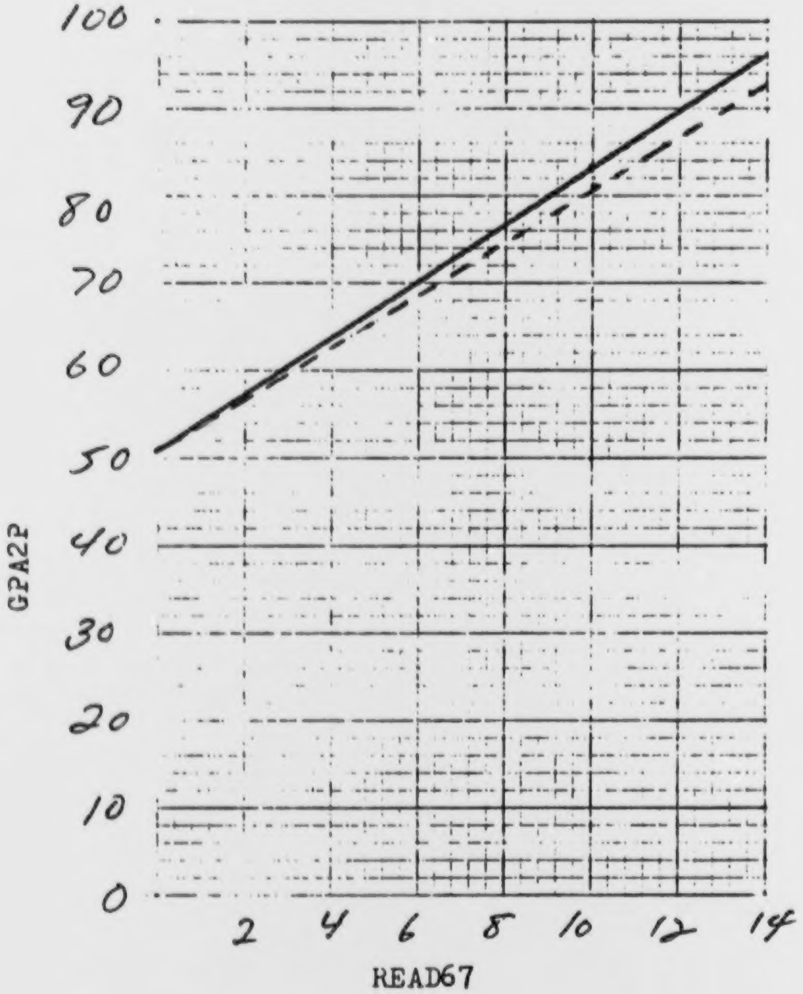
$r = -.14$ (n.s.)

———————— = Stressor Appraisal > 3.53 (n=26)

$r = .54$ ($p < .01$)

Figure 3

Regression of Grade Point Average on Reading Test Score for Girls with High and Low Stressor Appraisal Scores



---------------- = Stressor Appraisal ≤ 3.86 (n=17)

r = .63 (p<.01)

———————— = Stressor Appraisal > 3.86 (n=19)

r = .56 (p<.01)

phenomenon did not hold for the girls, however. From Figure 3 it can be seen that for girls whose STRA8PR was less than or equal to their median, 3.86, the correlation was .63 ($p<.01$), while for girls with higher STRA8PR the correlation was .56 ($p<.01$). (See Tables 26a and 26b for means and standard deviations to accompany Figures 2 to 5.)

The same analyses using mathematics test score instead of reading test score are displayed in Figures 4 and 5. Here the boys with the lower Stressor Appraisal had a correlation of .45 ($p<.05$) between MATH67 and GPA2P, while the boys with the higher appraisal had a correlation of .68 ($p<.001$). The boys with a lower appraisal, then, got more payoff for their math skills than for their reading, though it was not as high as it was for the boys with higher appraisal. The girls with a lower appraisal had a correlation of .82 ($p<.001$) between mathematics and grade point average, while the corresponding correlation for the higher appraising girls was .75 ($p<.001$). As with reading, then, the correlation between mathematics test score and grades tended to be high for the girls whether they had a low or a high Stressor Appraisal. The girls in general had higher stressor appraisals than the boys, however.

What it is about mathematics skills vs. reading skills that would explain our findings for boys is hard to say, but we will speculate as follows. Mathematics skills are more operational and context-free, so that a student is more likely to recognize a mathematics task as both requiring and enabling him or her to exercise skill than a task couched more in terms of reading. The special function of appraisal in alerting a student to the potential interference of a stressor event would then not be as crucial for mathematics-like school tasks as it would be for reading-like tasks. This, of course, bears only on the functioning of appraisal in relation to the students' achievement, not its function in coping with stressors more generally, which we have not been considering in this section of the analysis.

A simpler explanation for the superiority of math as a predictor of grades is that mathematics is more of a school-learned subject, and thus that is more of a proxy for various pro-school attitudes and behaviors that influence grades. This explanation, however, does not apply to Stressor Appraisal itself, which is the object of much of this analysis.

Regression of THIS predictor subscales, reading or mathematics, and locus of control, on grade point average

We have carried out a set of regression analyses identical

Figure 4

Regression of Grade Point Average on Math Test Score for Boys with High and Low Stressor Appraisal Scores

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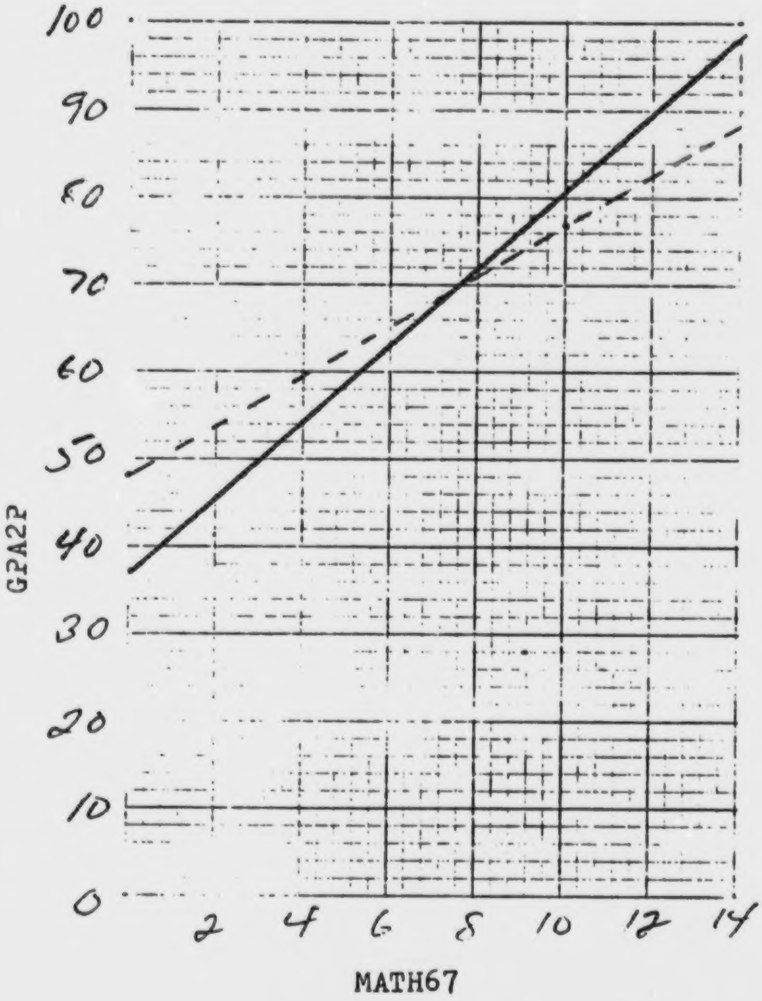

---------------- = Stressor Appraisal $\leq$ 3.53 (n=24)

$r = .45$ ($p < .05$)

———————— = Stressor Appraisal $>$ 3.53 (n=25)

$r = .68$ ($p < .001$)

Figure 5

Regression of Grade Point Average on Math Test Score for Girls with High and Low Stressor Appraisal Scores

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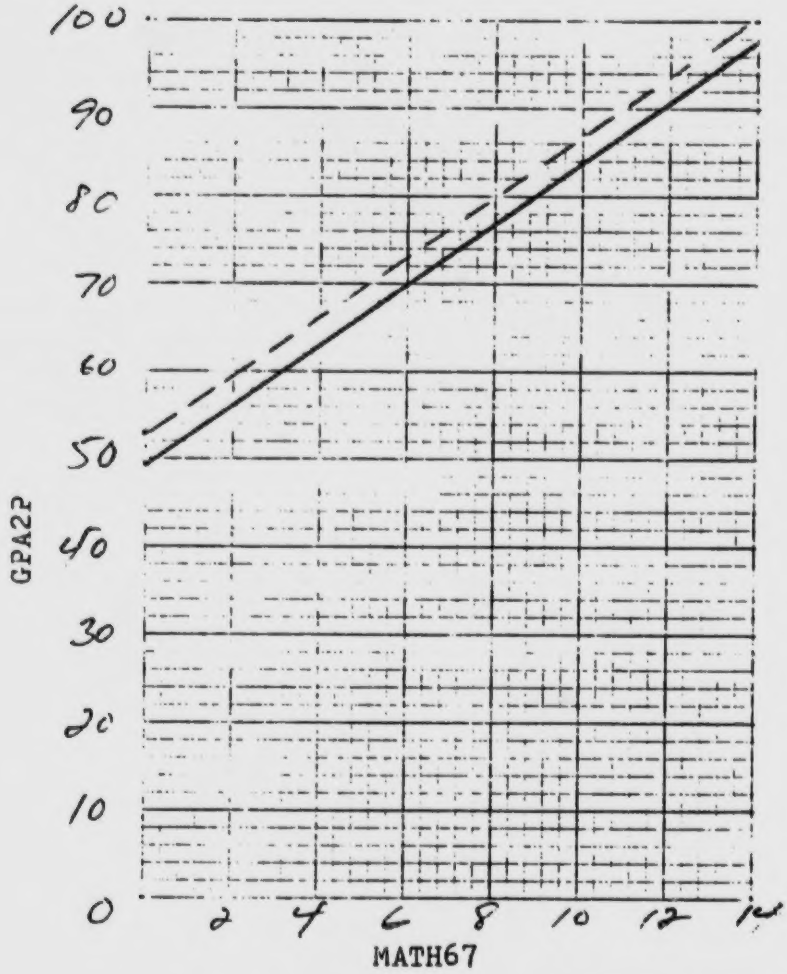

---------------- = Stressor Appraisal $\leq$ 3.86 (n=16)

r = .82 ($p < .001$)

———————————— = Stressor Appraisal $>$ 3.86 (n=19)

r = .75 ($p < .001$)

to the ones reported above for the THIS predictor variables, reading and mathematics test scores, and grade point average, but adding the Spring 1985 Nowicki-Strickland locus of control scores. The requisite scores were available for somewhat smaller subsets of students, altogether 74 boys and girls for the analyses involving reading, and 73 for the analyses involving mathematics. Only the tables with the reading variables are reproduced. Tables 54 to 56 show the means and standard deviations and the intercorrelations of the variables including reading and Table 57 reports the regression analyses. Externality correlates very strongly with the Stressor Frequency predictor variable for the girls ($r=.55$) and moderately for the boys ($r=.33$). Externality also has a substantial negative correlation with grade point average for the girls ($r=-.44$), but a relatively weak correlation for the boys ($r=-.27$).

The significance level has been set at 10% for the regression analyses. The interaction of Stressor Appraisal with reading emerges as the first variable predicting GPA2P for the whole group (20.5% of variance, $p<.001$), and Stressor Frequency appears at the second step (9.9% additional variance, $p<.01$). For the boys only, Stressor Frequency is found at the first step (25.2% variance, $p<.001$), Support Frequency at the second step (7.3%, $p<.10$), and the interaction of Stressor Appraisal with Reading at the third step (7.0%, $p<.05$). For the girls, reading emerges at the first step (39.6% variance, $p<.001$) and externality at the second step (5.6%, $p<.10$). In another analysis that is not shown, a similar result obtains if locus of control is entered immediately after reading test score, i. e., externality is seen to be significant for the total group and for the girls, but not for the boys alone. Finally, in the analyses substituting mathematics test score for reading test score, mathematics accounts for more variance than reading, and locus of control fails to emerge as a predictor for either the boys or the girls. Overall, locus of control appears to be less important to grade point average for the boys in the eighth grade than when they were in the sixth, but more important for the girls than when they were in the sixth grade. This might be part of a larger pattern in which the amount of control the boys can exercise over their grades (not just what they perceive they can control) is diminished in the eighth grade, compared to the boys' situation in the sixth grade and the situation emerging for the girls in the eighth grade. A finding not reported earlier but that comes to mind at this point is that, while the general pattern of correlations among locus of control, stressor frequency, and distress was the same for boys and girls, locus of control functioned more strongly for the girls than for the boys to moderate the impact of stressor events on distress. Thus when the regression analysis reported in Table 24 was carried out for boys and girls separately, Externality and the interaction between Externality and Stressor Frequency contributed significantly to variance of Distress for the girls but not for the boys.

Regression of THIS predictor subscales, reading or mathematics, and locus of control, on grade point average, separately for students with lower and higher externality

In seeking to understand the relationship between Stressor Appraisal and locus of control, we decided to do a regression analysis separately for the more internal and the more external students. Table 58 shows the correlations among the relevant variables for the 40 students--22 boys and 18 girls--whose Nowicki-Strickland score was less than or equal to 14. These correlations are shown in Table 59 for 34 students--18 boys and 16 girls--whose Nowicki-Strickland scores were greater than 14.

What stands out from the contrast of the 40 more internal and the 34 more external students is that locus of control related strongly to midyear grade point average ($r=-.43$) for the more internal students, but had no relationship ($r=.05$) to grade point average for the more external students. On the other hand, Stressor Appraisal had a relatively weak relationship to grade point average for the internal students ($r=.20$), and a strong relationship ($r=.50$) for the more external students. It appears that Stressor Appraisal mattered only for the students who were more external. A regression analysis that entered the independent variables in order from Reading to Nowicki-Strickland through the predictor variables from THIS determined that Midyear Grade Point Average was predicted for the more internal students by Reading (13.9% variance, $p<.05$), Nowicki-Strickland externality (11.0%, $p<.05$), Stressor Frequency (12.4%, $p<.05$), and Support Frequency (6.9%, $p<.05$). (See Table 60.) When Mathematics test score was substituted for Reading, the variables that explained Midyear Grade Point Average were Mathematics (50.8%, $p<.001$)), Nowicki-Strickland (5.5%, $p<.05$), and Stressor Frequency (4.1%, $p<.10$). (Table 60) For the more external students, when Reading was entered first, grades were predicted by Reading (9.1 %, $p<.10$), Stressor Appraisal (24.2%, $p<.01$), and Stressor Frequency (6.3%, $p<.10$). (Table 61). Finally, when Mathematics was entered first, the more external students' grades were predicted by Mathematics (31.8%, $p<.01$), Stressor Appraisal (8.8%, $p<.05$), and Stressor Frequency (5.8%, $p<.10$). (Table 61)

This breakdown of the variables predicting Midyear Grade

Point Average seems to yield the clearest picture of all the analyses up to this point. Reading and Mathematics figure significantly in all the prediction equations, but Mathematics is much stronger than Reading. Furthermore, both Mathematics and Reading contribute more strongly to GPA for students who are more internal. Stressor Frequency contributes significantly, though barely so in three of the four equations, after other variance has been removed. Among the more internal students, internality contributes positively, while among the more external students it is Stressor Appraisal that contributes positively. These patterns obtain despite the fact that the more external students experience more frequent stressor events and a greater correlation between level of externality and frequency of stressor events, than the more internal students. It appears, then, that Stressor Appraisal pertains to how the more external students deal with the stressor events when they occur, while the degree of internality bears most on how the more internal students cope with the stressor events when they occur.

But how do these patterns apply to the boys and the girls separately? There are too few cases to carry out a regression analysis for each of the four subgroups separately, but the correlations for the subgroups, as shown in Tables 62 and 63, throw some light on the question. For both the more internal boys and the more internal girls, but especially the latter, Nowicki-Strickland scores correlate more strongly with grades than Stressor Appraisal. For the more external boys, Stressor Appraisal correlates very strongly with grades, while Nowicki-Strickland has no correlation with grades. For the more external girls, however, neither Stressor Appraisal nor Nowicki-Strickland correlates with grades. Instead, the strongest correlation, after mathematics, is Support Appraisal, with the higher grades going to the girls who say they feel less good about the support events (the Reaction to People Support predictor variable). On the other hand, the correlation between grades and Support Appraisal is positive for the more internal girls. The correlations for the boys are weaker and in the opposite direction from these. Only the relationship for the more internal girls approaches significance.

Can we ascribe any meaning to these patterns? For the more internal boys and girls, particularly the girls, internality itself contributed positively to grades. For the more external boys and girls, it may be that a partial role reversal was associated with higher grades. For the boys, this meant appraising the stressor events more negatively and the support events more positively, like the girls. Not feeling in control, it was important for these boys' achievement that they value or valence the events which could bear on this achievement more strongly. For the girls, the role reversal entailed appraising the support events more negatively, i. e., being less encouraged by these events, or less involved in them, though the appraisal of stressor events was not changed.

This protracted analysis of the prediction of grades for what is really a small sample of students cannot pretend to be generalizable to students beyond the sample. It is in a sense a quantitative analysis that approaches being qualitative, a way of describing the one cohort of students involved more precisely, as the qualitative analysis in its own detail approaches being a quantitative one. What we do feel is that we have come to understand this particular cohort with great depth and breadth. Some of the patterns we expect to be borne out in analyses of other samples, while others may be specific to the context of this one sample. We suspect this is particularly true of our findings, and nonfindings, about support events. We are reminded of Mitchell's conclusion from a review of research that found substantial inconsistencies in the findings on social support, that it is crucial to pay attention to the context of social support and its bearing on stress, or, we would add, on academic achievement. (Mitchell, R. E., 1984).

Teacher Rating Scale correlations with achievement measures, THIS subscales, locus of control, and self esteem

In Spring 1985, when the cohort that is the focus of this chapter was in the seventh grade, Fahs and Grannis created a Teacher Rating Scale (TRS) to measure teachers' perceptions of the academic and social behavior of students, especially in the classroom. (See Appendix for Teacher Rating Scale.) Each of 111 seventh and eighth grade students was rated by three teachers. Altogether 12 teachers, six male and six female, rated the students. At least one male and one female teacher rated each student, so that we could examine whether male and female teachers had different perceptions of students' behavior. The teachers' responses to TRS were factor analyzed, and all but a few of the 25 items loaded on one of two principal factors. The factors have been named simply "positive behavior" (POSBE) and "negative behavior" (NEGBE). Table 64 lists the items associated with each of these factors.

Table 65 shows the means and standard deviations of POSBE and NEGBE for the 57 students in the cohort who were rated at this time, along with the means and standard deviations of this sample's scores on other measures that will be correlated with POSBE and NEGBE. For 31 boys, the mean score on POSBE was 107.9, while for 26 girls it was 142.7, a highly significant difference (p<.001). For the boys, the mean score on NEGBE was 67.9, while for the girls it was 53.6, again a significant difference (p<.01). The boys, then, were perceived as behaving considerably less positively and more negatively than the girls. Table 66 shows that for the sample as a whole, POSBE correlated .67 (p<.001) with eighth grade midyear grade point average, and NEGBE correlated -.50 (p<.001). For the boys alone, as shown in Table 67, these correlations were .64 (p<.001) and -.45 (p<.01). For the girls alone, Table 68, they were again .64 (p<.001) and -.45 (p<.01). For the boys, the TRS correlations with grade point average were higher than the correlation of reading score with GPA (r=.42, p<05), while for the girls the reading score correlation (r=.62, p<.001) was virtually the same as the correlation for POSBE and considerably higher than the correlation for NEGBE. For both the boys and the girls, the TRS correlations with GPA were lower than the correlations of math score with GPA (.71, p<.001 for the boys and .79, p<.001 for the girls). Furthermore, math score itself correlated significantly with the TRS scores, especially for the girls. The correlation of math test score with POSBE for the boys was .57 (p<.001) and with NEGBE was -.40 (p<.01). For the girls the correlation of math test score with POSBE was .70 (p<.001) and with NEGBE was -.68 (p<.001).

Of the four principal predictor subscales of THIS, Stressor Appraisal had the highest correlations with the TRS scales. For the sample as a whole, STRAPPR correlated .43 (p<.001) with POSBE and -.33 (p<.01) with NEGBE. The correlations were lower for the boys alone (r=.35, p<.05, and r=-.14, n.s.) and for the girls alone (r=.21, n.s., and r=-.30, p<.10). As was the case with Stressor Appraisal and Grade Point Average, now Stressor Appraisal and POSBE are seen to be more highly correlated for the total sample than when the data for the boys and the girls are analyzed separately, implying that all three variables are categorically higher for girls than for boys, unless they are covarying with still another, as yet unmeasured variable. The Support Appraisal correlations were in the same direction, but were lower, with the exception of the relatively high correlation of SUPAPPR with NEGBE for the girls (r=-.34, p<.05).

Though Stressor Appraisal did not correlate with TRS scores nearly as strongly as did math test score, it did correlate more strongly than self-esteem or locus of control with the TRS scores, for the total sample. Table 69 includes the home, peer, and school subscales of the Hare Self Esteem Scale and the not-internal scores for cognitive, social, and physical failure events from the Connell Locus of Control Scale. The one score that correlated as highly as Stressor Appraisal with the TRS scores is School Self-Esteem, which correlated .43 (p<.001) with POSBE and -.36 (p<.01) with NEGBE. The students' perceptions of how they were esteemed by their teachers were consistent with the teachers' ratings. Just barely significant, due partly to the relatively low *n* for the Connell instrument, were not-internal locus for cognitive failure with POSBE (r=-28, p<.10) and not-internal locus for physical failure with POSBE (r=-.24, p<.10) and with NEGBE (r=.26, p<.10).

When the boys and the girls are analyzed separately, these relationships tend to be the same or weaker, with the startling exception of not-internal for physical failure for the girls, for whom PHYLCF correlated -.49 (p<.10) with POSBE and .61 (p<.01) with NEGBE (tables not shown). The girls who felt they did not have control over failures in the physical domain were rated by their teachers much lower on positive classroom behavior and much higher on negative classroom behavior than the girls who believed they did have this control. The sample for whom all of these scores are available, however, is just 15 girls. An analysis has been done with the larger sample of students, both in the cohort and in the previous cohort, who were rated and who took the Connell at that time; in this sample, although the negative correlation of not-internal for cognitive failure with POSBE held up, the corresponding correlation for physical failure diminished. The correlation reported above for physical locus, then, is a cohort phenomenon, and may represent something about the interaction of the 15 girls with their teachers and with each other, as well as the chance concentration of girls with these scores in the cohort.

Prediction of POSBE and NEGBE from other variables

In various analyses with data collected when the cohort students were in the seventh and eighth grades, POSBE has consistently correlated positively with Stressor Appraisal, reading test score and mathematics test score, and negatively with not-internal locus of control in the cognitive domain. NEGBE has consistently had correlations that are the opposite of these. Support Appraisal has correlated positively with POSBE and negatively with NEGBE for the total sample and for girls alone, but for the boys these relationships have tended to be opposite. These correlations must be kept in mind to interpret the results of the regression analyses that are reported in the next paragraphs.

Regression analyses have been carried out to examine the relative contributions of reading or mathematics test scores, stressor appraisal and support appraisal, and locus of control for failure scores, on teacher ratings of positive behavior and negative behavior. For 76 seventh and eighth grade students for whom all of these scores, including reading and excluding mathematics, were obtained when the cohort was in the seventh grade, POSBE was predicted by locus of control for cognitive failure (7.9% of variance, $p<.05$) and by reading test (7.7% of remaining variance, $p<.05$). For the same 76 students, substituting mathematics for reading, POSBE was predicted by mathematics test (8.1%, $p<.05$) and by cognitive locus (5.9%, $p<.05$). Analyzing separately for 34 boys, POSBE was predicted by reading (9.6%, $p<.10$) and by cognitive locus (10.6%, $p<.10$), but not by mathematics. For 42 girls, POSBE was predicted by reading (11.3%, $p<.05$) and by mathematics (25.7%, $p<.001$), but by no other variable. Looking at NEGBE instead of POSBE, no combination of variables with reading contributed significantly to the prediction of NEGBE for the total sample, while mathematics alone just barely reached significance for the total sample (3.9%, $p<.10$) and for the girls alone (7.1%, $p<.10$). (Tables not shown.)

In another set of analyses, the sample was restricted to cohort students, and the Connell scores were omitted from the equations, this latter being done because the cohort samples are too small when the Connell scores are included.

Reading predicted POSBE for the total sample (52 students, 12.4%, p<.05), for the boys (30 students, 16.6%, p<.05), and for the girls (22 students, 27.6%, p<.05). Reading predicted NEGBE only for the girls (23.6%, p<.05). Mathematics predicted POSBE for the total sample (now 53 students, 26.2%, p<.001), for the boys (31 students, 21.8%, p<.01), and for the girls (22 students, 43.7%, p<.001). Finally, Mathematics predicted NEGBE for the total sample (24.7%, p<.001), for the boys (18.6%, p<.05), and for the girls 43.7%, p<.001). Stressor Appraisal did not reach significance in any of these predictions, while Support Appraisal contributed only to the prediction of NEGBE for boys (9.5% additional variance after mathematics test, p<.10). The correlation between NEGBE and Support Appraisal was positive (r=.28) for the boys, suggesting once again that boys in this cohort who valued the support events more highly were reinforcing one another in negative behavior in the classroom, at least when they were in the seventh grade. (Tables not shown.)

The various regression analyses reported above all use the AEI scores obtained in Fall 1984, when the cohort was in the seventh grade. The correlations of GPA with AEI scores were higher in Fall 1983, when the cohort was in the sixth grade. THIS subscale scores, obtained in Fall 1985 when the cohort was in the eighth grade and thus after the Teacher Rating Scale was given to the teachers, correlated much more highly both with grade point average and with TRS scores. Regression analyses looked at the contribution of reading or mathematics, THIS subscale scores, and POSBE and NEGBE to the prediction of GPA2P for the cohort in eighth grade. When reading was included, POSBE emerged as the first predictor (43.1% variance, p<.001) and Stressor Frequency as the second predictor (3.9%, p<.05) for the 57 students in the total subsample. For 31 boys, POSBE alone (38.0%, p<.001) predicted grade point average, while for 26 girls, GPA2P was predicted by POSBE (41.6%, p<.001) followed by READ67 (15.2%, p<.01). When mathematics was included instead of reading, MATH67 emerged first (53.4%, p<.001) with POSBE second (9.4%, p<.001) for the total sample, MATH67 (49.5%, p<.001) and POSBE (7.5%, p<.05) predicted for boys, and MATH67 (62.1%, p<.001) predicted for girls. (Tables not shown.)

These analyses throw a very important perspective on the results of earlier analyses that showed mathematics test score predicting grade point average much more strongly than reading or any other variable. It could be argued that math aptitude is driving these relationships, in so far as doing well on math is necessary for doing well in school, and as students might adjust their behavior to the prospects that aptitude sets for them. However, an equally plausible explanation focuses on the realization that math, much more than reading, is a school-learned subject and is therefore dependent on students' behavior and experience in school. Math test score, then, might particularly concentrate the distillation of years of students' classroom behavior and experience. Math test score accounts for much of the variance that is otherwise explained by POSBE, and also variance accounted for by NEGBE, in the prediction of grade point average. Even so, additional variance is explained by POSBE, for the total group and for the boys. Positive behavior, consisting of both academic effort and social cooperativeness, seems to underly the teachers' grading and to explain the higher grades consistently given to the girls, or lower grades given to the boys, in our research and in other research that we have consulted. Finally, Stressor Appraisal, which has a lower correlation with math than with with POSBE or NEGBE, may be contributing uniquely to the behavior teachers evaluate positively or negatively. Our evidence for this, however, is incomplete and requires replication with a larger, more diverse sample.

Male and female teachers' ratings of student behavior

We have compared the POSBE and NEGBE ratings of the 6 male and 6 female teachers for the total sample of the students rated in Spring 1985, and for the boys and girls separately. The procedure calculated the average rating each 1 or 2 male teachers gave a given student and compared this with the average rating given the same student by 1 or two female teachers. T-tests were used on matched pairs to compare the ratings of male and female teachers for the same individuals. When the boys and girls were combined, there was no difference in the POSBE ratings by male and female teachers, but there was a slight difference between their NEGBE ratings (by male teachers, 2.16, by female teachers, 2.04, $p<.05$). When the ratings for boys were examined separately, male teachers were found to rate boys higher on POSBE than did the female teachers (2.54 vs. 2.34, $p<.05$), while there was no difference in the NEGBE ratings by male and female teachers (2.38 vs. 2.34, n.s.). Examining the ratings for girls separately, it was found that male teachers rated girls lower on POSBE than did female teachers (2.94 vs. 3.12, $p<.05$) and that male teachers rated girls higher on NEGBE than did female teachers (1.97 vs. 1.78, $p<.01$).

In three out of the four comparisons for boys and girls separately, teachers of the same sex as the students being rated evaluated them more favorably than did the teachers of the opposite sex. The exception to this was negative behavior ratings for boys, which were assigned to boys equally by male and female teachers. This suggests that in addition to the real differences in behavior that entered into the different ratings for boys and girls, and subsequently their grades, there was a difference in the perception of negative behavior, specifically one in which the male teachers did not favor boys in the same way that the teachers generally tended to favor students of their own sex.

CHAPTER THREE

IN-DEPTH EXAMINATIONS OF STUDENTS' COPING PROCESSES AND LOCUS OF CONTROL

In the original proposal to the foundation (Grannis, 1983), one of the objectives was to examine the coping processes of students whose locus of control was relatively internal or external. The findings of two studies (Fahs, 1987; Fahs, 1987a) which investigated the associations among students' perceptions of stress, coping styles, personal attributes (locus of control and self-esteem), and academic achievement will be summarized at this time. A third study (Bethea, 1988) which focused more directly on locus of control and self-esteem will be presented below.

ASSOCIATIONS AMONG STUDENTS' PERCEPTIONS OF STRESS, COPING STYLES, PERSONAL ATTRIBUTES AND ACADEMIC ACHIEVEMENT

The focus of one study (Fahs, 1987) was the examination of students' coping processes in relation to stressful academic and social events that were part of their lives in the study school. In addition to investigating their coping processes per se, it was of particular interest to see whether students with differing perceptions of stress and levels of academic achievement used different coping styles. In line with the increasing interest in the phenomenon of resilience and stress-resistance (Werner & Smith, 1982; Rutter, 1983), attention was given to those coping processes and personal attributes that appeared to empower children to attain mastery and competence despite exposure to school stress as well as those which tended to push children into more self-defeating and antisocial patterns.

In the first part of the study, the examination of students' coping with in-school stress had a specific focus. In the winter of 1985, 179 students (83 boys and 96 girls) in the seventh and eighth grades answered a self-report instrument, The Academic Coping Inventory (Tero & Connell, 1984) regarding coping with an academic stressor (previous test failure). (See Appendix C-1 for the version of The Academic Coping Inventory used in the study. A full description of the instrument, its validity and reliability, may be found in the complete description of this study [Fahs, 1987]). This instrument yields four coping styles or strategies: Positive Coping, Projection, Denial and Non-coping (anxiety amplification). These coping styles were analyzed in relation to the two stressor subscales of the (then) Academic Environment Inventory, Stressor Appraisal and Stressor Frequency, as well as to measures of academic achievement, self-esteem, and locus of control. Academic achievement was defined as students' mid-year and final grade point averages, made up of the four major academic subject grades (used throughout the project), for the 1984-85 school year. Self-esteem was measured by The Hare Self-Esteem Scale (Hare, 1977); and locus of control was measured by the Children's Nowicki-Strickland Scale of Internal-External Control

(Nowicki & Strickland, 1973).

In the second part of the study, a subsample of 53 students was interviewed by the researcher to examine in greater depth their coping with a broader range of school stressors. Four distinct status groups of students were created within a 2 x 2 matrix of high and low perception of stress (from the responses to the AEI Stressor Frequency subscale) and high and low Mid-Year Grade Point Average (taken from official school records in January, 1985). The interviews were audiotaped and transcribed. Students were asked to enumerate all the things that upset them in school. These students were also asked how they coped (e.g., what they thought, said and did) in these situations and how they appraised the situations (e.g., whether they considered the situations as ones in which they could take some constructive action or ones which just had to be accepted). Students' retrospective self-statements about how they coped were gathered with a Coping Interview designed by the researcher which combined open-ended questions and an endorsement statement check-list (See Appendix C-2a and C-2b); students' (cognitive) appraisals were measured by Question 6 of the Coping Interview (Appendix C-2a). The students' responses to the interview questions and to the Academic Coping Inventory were also analyzed for differences resulting from the interaction of varying amounts of stress (as measured by the Stressor Frequency subscale of the AEI) and varying levels of academic achievement.

Correlations of Positive Coping, Projection, Denial, and Non-coping with Stressor Appraisal, Stressor Frequency, self-esteem, locus of control and academic achievement

The findings of the first part of the study which analyzed the responses to the Academic Coping Inventory proved rather uneven. More weakly than expected, Positive Coping was related to Mid-year Grade Point Average ($r[172]= .14$, $p<.05$) and Final Grade Point Average ($r[174]= .11$, $p<.10$). Contrary to expectations, Positive Coping was not found to be related to the Stressor Appraisal subscale of the AEI; and Non-coping was not found to be related to academic achievement. (Tables not shown).

Projection was negatively related to academic achievement only for the boys who were better readers ($r[36]= -.49$, $p<.01$). Denial was weakly related to academic achievement for the whole sample ($r[172]= -.16$, $p<.05$) and for the girls separately ($r[92]= -.19$, $p<.05$) but not for the boys. (Tables not shown). Projection and Denial were weakly related to Stressor Appraisal for the whole sample ($r[156]= -.11$, $p<.10$ and $r[156]= -.15$, $p<.05$, respectively) and for the boys ($r[71]= -.19$, $p<.10$ and $r[71]= -.18$, $p<.10$, respectively) but not for the girls. Projection was related to Stressor Frequency for the whole sample ($r[156]= .20$, $p<.01$) and more strongly for boys separately ($r[71]= .28$,$p<.01$) than for girls ($r[85]= .17$,$p<.10$). Non-coping was related to Stressor Frequency for the whole sample ($r[156]= .26$, $p<.01$) and equally strongly for the boys and girls separately. Stressor Frequency was not related to Denial for the whole sample or for boys separately. There was a weak correlation for girls. (See Table 72 for the correlations between the coping and stress variables for the whole sample and for boys and girls separately).

Table 73 shows the results of the examination of the relationships among the various coping styles, self-esteem, and locus of control. For the boys separately, the only statistically significant correlations among the four subscales of the Academic Coping Inventory and the four scores of the Hare Self-Esteem Scale were between school self-esteem and Projection and school self-esteem and Non-coping; the correlations were negative. For girls separately, both general and school self-esteem were positively related to Positive Coping. Projection and, particularly, Denial were negatively related to general, school and home self-esteem for the girls. Externality of control was not related to Positive Coping for the whole sample or for boys and girls separately. It was, however, related positively to Non-coping for the whole sample and for girls alone. Externality was related positively to Projection and Denial for the boys but not for the girls.

Further information is provided by looking at the pertinent variable means for four groups of students created by dividing the sample by gender and reading score. (To divide the total sample by reading score, a score of 6.7 in the Adjusted 1984 Reading Score was set, creating one group above grade level in reading and the other at or below grade level in the previous year.) The mean of the Adjusted 1984 Reading Score for boys who were better readers (M = 8.2) was higher than all the other groups, yet the mean of their Final Grade Point Average (M = 72.8) was significantly lower than that of the girls with higher reading scores (M = 79.0) and virtually the same as that of the girls with lower reading scores (M = 72.6). These boys with higher reading scores also had significantly lower general self-esteem (M = 88.8) than girls with higher reading scores (M = 96.1) and than the girls with lower reading scores (M = 93.2). There was also a tendency that missed the level of significance for their self-esteem to be lower than that of boys with lower reading scores (M = 92.4), even though the latter had a significantly lower Grade Point Average (M = 66.1). The only significant difference in locus of control was between boys with higher reading scores (M = 12.9) and girls with lower reading scores (M = 15.1). (See Table 74 for the means of other variables for these four groups.)

Before proceeding to the results of the second part of the study, a few comments about the results just presented are in order. First, the Academic Coping Inventory (Tero & Connell, 1984) which was used for the first time with an inner-city junior high school sample proved to be insensitive in measuring two dimensions of students' coping, positive coping and non-coping. The responses to the

Positive Coping subscale appeared to be influenced by social desirability; the mean, therefore, indicated a ceiling effect that resulted in a highly skewed distribution that did not measure the variability that existed. While the distribution of the responses to the Non-coping subscale was not skewed, this subscale also failed as a useful predictor. It would appear that the items making up this dimension described anxieties characteristic of the early adolescent age group regardless of academic competence.

The fact that Projection made a negative contribution to academic achievement only for the boys with higher reading scores may be an indication that students' blaming others to some extent for academic failure in a setting that is not conducive to learning may be not only realistic but not unhealthy. Students have, in fact, complained to project staff about other students who do not pay attention to the teacher and about teachers who do not teach. These phenomena have been observed to be more frequent in the lower-track classes where the students with lower reading scores were more frequently placed. Graham and Long (1985) have reported a related finding, namely, that anger was the dominant affect when students attributed academic failure to teacher hindrance (poor instruction).

When one looks at the findings between the subscales of the Academic Coping Inventory and the Hare Self-Esteem Scale, the gender differences are startling. For the boys as a whole, none of the academic coping subscales were related to general self-esteem. Projection and Non-coping were related to school self-esteem but rather weakly. For the girls, all of the coping subscales, except Non-coping, were related to general and school self-esteem in the expected directions. For both boys and girls, there were moderately strong correlations between school self-esteem and Final Grade Point Average (r[64]= .41, p<.001 and r[81]= .45, p<.001, respectively). There was no correlation for boys between general self-esteem and Final Grade Point Average, while for girls there was a moderately strong correlation (r[81]= .32, p<.01). From these statistics, the speculation could be made that the rewards of school as presently construed, namely, good grades, are both more attainable for and more valued by girls and, therefore, more ego-enhancing. (That good grades are more easily attainable by girls has also been indicated in the earlier discussion of the Teacher Rating Scale and its correlation with students' grades.) Yet, behind the finding of a positive correlation between general self-esteem and academic achievement for all of the girls together, there was only a strong correlation for the girls with higher reading scores (r[26]= .48, p<.01) and none for the girls with lower reading scores.

School achievement, therefore, seems to have had a strong "pull" and reward system that enhanced the general and domain-specific self-esteem of the girls with higher reading scores. In spite of the lack of a similar correlation between general self-esteem and academic achievement, the girls with lower reading scores reported high self-esteem and their grade point averages were better than expected. It was the boys who appeared the most vulnerable, regardless of reading ability. In fact, the finding that boys with higher reading scores had the lowest self-esteem of all four groups (when the sample was divided by gender and reading score) suggests their particular vulnerability. One is reminded of Petersen's (1986) finding that high achieving, middle class white girls suffer lower self-esteem because of the conflict they face between achievement and popularity. One could speculate that the bright black boys in this sample face a similar conflict, particularly in an inner-city school where the press for the boys may be more toward a peer culture in which academic achievement is not generally valued.

Relationships among Academic Coping Inventory subscales, and the interview restrospective self-statements and checklist endorsement statements

Fifty-three students were individually interviewed by the researcher. All 53 completed the checklist for a stressful academic event (either failing a test or doing poorly on a test); and 38 responded for both the academic event and a social event. The upsetting social events discussed in the interview (and therefore on the checklist) were more varied: Sixteen students referred to "students not getting quiet in the classroom," fourteen referred to "lunchroom disorder (throwing food and fighting)", three to "not being able to go out of the building for lunch," and one each to "other kids fighting," " people picking on me," and "being kept out of class for being late." The procedures for the coding of the interviews, the establishment of inter-coder agreement, and the lack of internal consistency of the factors of the checklist are described in detail elsewhere (Fahs, 1987) and will not be repeated here (See Appendix C-2a and C-2b for copies of the Coping Interview and checklist).

In brief, the correlational analyses included positive academic coping self-statements, non-coping academic self-statements, and positive social coping self-statements as well as the student's appraisal of the situation as one that could be changed or just had to be accepted from the interview and four pertinent and unequivocal checklist statements that made sense for both academic and social situations: "I say it didn't matter" (denial), "I say the test (person) was not fair" (external negative attribution or projection), "I say I'm just no good" (internal negative attribution), and "I say I'm just as good as anyone" (internal positive attribution).

Table 75 sets forth the most salient results of this analysis. The positive academic coping self-statements were moderately related to the positive academic self-evaluations on the checklist for the whole subsample and for boys and girls separately but not to the Positive Coping subscale of the ACI.

The Projection subscale of the ACI was related positively to the checklist's external negative attribution statement for the boys and to the internal negative attribution statement for the girls, both in the academic domain. Neither statement for the social domain was related to the Projection subscale. This difference would appear to follow the pattern seen earlier in the results of the first part of the study where there was a positive correlation between Projection and externality (blaming others) for boys and a positive correlation between Non-coping (anxiety enhancing self-blame) and externality for the girls (Table 73).

The ACI Denial subscale was moderately related to the denial endorsement statement in the academic situation for boys but not for girls. There were no significant correlations between the denial statement in social situations and the Denial subscale. This lack of correlation between the Denial subscale of an instrument described as an academic coping inventory and the social denial statement adds strength to each as measuring discrete constructs. Between the academic denial and social denial statements, there was no correlation for the whole sample but a moderately strong positive correlation for the girls (r[18]= .47, p<.05 and a strong negative correlation for boys (r[14]= -.55, p<.05). This finding may be related to the fact that boys reported using more denial in social than academic situations and more denial in social situations than girls (see below) and the gender role differences discussed in previous sections of the report. There was a tendency for the ACI Non-coping subscale responses to be positively related to the non-coping self-statements in the interviews for the total sample, but not for boys and girls separately. That there was a number of correlations between the coping processes measured in these different ways at least six weeks apart shows consistency in the students' self-reporting and adds strength to the argument that people develop patterns, to their detriment or advantage, of coping with stressful situations.

Another aspect of this analysis examined whether there would be any variation in the retrospective self-statements and the endorsement statements by context (e.g., academic or social). Analysis of two of the checklist statements, projection (external negative attribution) and denial, for variations in responses by context showed the following statistically significant results: 1) Both the boys and the girls reported more projection in the social situations than in the academic; 2) Boys reported more denial in social situations than in academic situations; 3) Girls reported more projection in academic situations than boys; and 4) Boys tended to report more denial in social situations than girls. The girls also had higher Final Grade Point Averages than the boys and higher Stressor Appraisal scores than the boys. In spite of their higher denial scores, the boys in this small group also tended to report higher Stressor Frequency than the girls. Endorsement of the academic denial statement was negatively related to academic achievement for the boys in this subsample; there was also a tendency for the ACI subscale Denial to be negatively related to academic achievement for the boys alone as well (Fahs, 1987).

Analysis of the retrospective self-statements in the interviews showed marked differences by context: 79% of the students reported making at least one positive coping self-statement in the stressful academic situation, while only 23% reported such statements in the stressful social situations. In the social situations, about twice as many students reported taking positive coping action as making positive coping self-statements. The same number of students made non-coping self-statements in the academic and social situations (ten in each).

Although the discussions about stressful situations on the open-ended part of the interview were not coded and analyzed, the situations mentioned were noted and tabulated. Thirty-seven of the 129 events mentioned concerned academic situations; the rest were concerned with social situations. Over one-third of the students mentioned the lunchroom (noise, chaos, and food fights) and kids not cooperating and being disrespectful to each other. The next most frequent, for about a sixth of the students, was kids bullying and picking on them. The complete list of the stressful situations is shown in Table 76. There were also differences in the number of students who mentioned each type of stressful situation: 15 students mentioned at least one stressful academic situation; 47 mentioned at least one stressful social situation.

Another purpose of this part of the study was to determine whether there were variations in the restrospective self-statements and coping styles for students by position in the 2 x 2 matrix defined by high and low perception of stressor frequency and academic achievement. The percentages of students making positive coping self-statements in academic and social situations by status groups are shown in Table 77. (Because the number of subjects in each group is very small, these findings should be viewed with some caution.)

A comparison of the mean scores of the responses to the Academic Coping Inventory, the Stressor subscales of the AEI, the Hare Self-Esteem Scale (the general subscale only) and the Nowicki-Strickland locus of control scale also revealed some status group variations beyond the defined differences in academic achievement and perception of stressor frequency. (Again, the results must be viewed with some caution because the number of students in each cell was small. In addition, because multiple _t_ tests were performed, the _p_ values may overstate the significance of the differences. These statistics are being used for descriptive purposes to highlight what is of interest for further study rather than for statistical inference.)

As might be expected, the greatest contrast between students was seen in the comparison of the high achieving/low stress and the low achieving/high stress groups (Groups 2 and 3). The high achieving/low stress group reported less Projection, higher Stressor (Reaction) Appraisal scores, higher self-esteem, and more internal locus of control (See Table 78). The students in this high-achieving group were more likely to be girls (11 girls and 4 boys), while those in the low-achieving group were more likely to be boys (9 boys and 6 girls). It is interesting to note what happened for the group of students with high Grade Point Average that also reported high Stressor Frequency (Group 1). Projection and Denial were reported about the same as in all other groups; but there was a significant drop in self-esteem and a tendency towards a more external sense of control. In addition, the composition of the group changed to nearly equal numbers of boys and girls (7 boys and 8 girls). The students in the low-achieving/low stress group (Group 4) were more likely to be boys than girls (6 boys and 2 girls) and were more likely not to be in school at all (the pool for this group, like the others, was comprised of 15 students, 10 boys and 5 girls, seven of whom this researcher was unable to find in school to interview). There was a tendency for the self-esteem of these students to be higher than that of their low-achieving peers with higher Stressor Frequency scores, even though their grades were significantly lower.

The final research question in this part of the study asked whether students used cognitive appraisal as measured by their responses to an interview question ("Let's think again about that situation. Did you think you could change it or do something about it? Or was it one you just had to get used to or accept?"). Eighty-seven percent of the 52 students said they thought they could make changes in the stressful academic situation compared with only 49% in the stressful social situation. There was virtually no difference in these responses by gender.

The percentages of students who felt they could make changes in the stressful academic and social situations by status group are presented in Table 79.

Positive cognitive appraisal in the academic domain as measured in this study was not related to academic achievement, again probably due to the skewed results caused by the social desirability of responding affirmatively to the question about one's ability to do something about poor test results. Positive cognitive appraisal in the social domain was, however, related to academic achievement for boys ($r[26]= .38$, $p<.05$) but not for girls. This latter would appear to relate to the findings reported earlier of the greater negative impact on boys than on girls of externality of control relating to successes in the physical domain and failures in the physical and social domains.

The tentative profiles of students that one can draw from the variable means in the four status groups present some characteristics that continue to be puzzling. One might expect, for example, that high-achieving students would have consistently higher general and school self-esteem than low-achieving students but that would not appear to be the case. Pearlin and Schooler's (1978) study of adults' coping behaviors in different role areas is suggestive of some explanations. They found that psychological resourses, namely, self-esteem, freedom from negative attitudes towards self, and a sense of control, were the most important in mitigating the stresses of the work place, where people may have little direct control. One could posit that in this regard many schools are like places of work. Using this lens, one could speculate that students with a strong sense of control and high self-esteem might have personal psychological resources that would mitigate their feelings of stress. Indeed, the groups that appeared to have these personal resources did report low Stressor Frequency (See Group 2, Table 78). The equally high-achieving group that reported more stress also reported lower self-esteem and a weaker sense of control (Group 1). In the low-achieving groups, Group 4 tended to report higher self-esteem than Group 3 and lower Stressor Frequency.

A final comment on the findings of this study concern the use of denial. The means of the Denial subscale of the Academic Coping Inventory and the academic denial item on the checklist were the same for boys and girls. The difference came in the social context where boys tended to use more denial than girls. One might speculate that the social environment of this particular school (and probably other inner-city schools) provides a context that makes it difficult for many students, especially boys, to cope _appropriately_ with the stresses they feel. Many social (interpersonal) situations in school may well be more stressful for boys, necessitating a more denying, disengaged response which not only escalates their difficulties by being misinterpreted and punished (cf. Johns & Johns, 1983) but also carries over into their academic attitudes and behaviors.

Longitudinal study of coping styles

A second study by one of the project staff members (Fahs, 1987a) was designed to examine whether there were continuities or developmental trends in students' coping styles and whether there were differences by gender. The Academic Coping Inventory was administered a second time to 61 of the 86 former seventh grade cohort, 25 girls and 36 boys, most of whom were then in the eighth grade. Second-year responses to this measure were also compared for the remaining students in the four status groups defined by differing perceptions of stress and levels of achievement when the students were in the seventh grade in the previous year.

Other perspectives on students' coping were obtained by comparing The Coping Interview responses of a subsample of these eighth graders with teachers rating scores (Teacher Checklist of Student Behaviors, Fahs & Grannis, 1985) in an effort to determine whether students were perceived to be using the coping behaviors they reported.

A final perspective on students' coping was derived from responses to a sociometric measure called The Revised Class Play (Masten, Morison & Pellegrini, 1984) which has been used in other studies to identify high-risk and stress-resistant children. This measure contains 30 roles, 15 positive and 15 negative, which yield three dimensions, "sociability-leadership" from the positive items, and "aggressive-disruptive" and "sensitive-isolated" from the negative items. Examples of the roles in the three dimensions are "Someone everyone listens to," "Someone who picks on other kids," and "Someone who is often left out." The somewhat amended version which was scored for this study consisted of 14 positive items and 14 negative items (9 "disruptive" and 5 "isolated" items). As in the original administration, students voted twice, once for boys and once for girls; records were kept of boys voting for boys, boys voting for girls, etc. This measure was administered to most of the eighth grade sample when they were in the sixth grade. The details of this administration and the reliabilities of the instrument are described elsewhere (Fahs, 1987a; see Appendix F).

The longitudinal sample for this study consisted of the dard deviations of coping styles, perceptions of stressor frequency and academic achievement for boys and girls indicated no statistically significant differences for the two years, or between boys and girls for the coping responses or Stressor Frequency. There were differences, however, in the Final Grade Point averages, with the girls' being higher for both years. (See Table 81).

The only significant correlations between coping styles and final grades came in the second year between final grades and Projection for the girls (r[25]= -.57, p<.01) with an opposite tendency for boys at the end of the year (r[35]=.27, p<.10). In other words, there was no continuity between coping styles as measured and achievement.

A second perspective on students' coping styles was gained by looking at the characteristics of the former seventh grade students in the four status groups defined by perceptions of stress and levels of academic achievement discussed earlier. (See Table 82). The achievement levels of the four groups remained constant over the two years (i.e., those with higher achievement remained higher and those with lower remained lower). However, the higher stress groups reported less stress than in the previous year and the lower stress groups reported more stress, bringing them closer together. In fact, in the second year, there was no longer a statistically significant difference between the two high achievement groups in perception of Stressor Frequency. In the first year, the subsample of 61 students who completed the Academic Coping Inventory in two successive years. Of this group, 47 students (21 girls and 26 boys) were also rated by their teachers in their seventh grade year; the same number had been rated by their peers with the Revised Class Play in their sixth grade year. Thirty-one of this subsample were also interviewed in their seventh grade year. All of the students had also reported their feelings about stressors in the school by completing the AEI in fall of 1984 and THIS in fall of 1985. (It should be noted that this subsample of eighth grade students overlaps but is not identical with the longitudinal sample which is described in some detail earlier in the chapter).

The comparison of the students' responses to the Academic Coping Inventory when they were in the seventh and eighth grades revealed modest correlations for the sample as a whole, with the exception of Non-coping which was stronger. The correlations were generally stronger for girls, with the exception of Non-coping which was stronger for boys. (See Table 80). This lack of continuity can not be explained by different levels of stress in the two years, for there was considerable continuity in students' perceptions of the frequency of stressor events as has been reported earlier. It is probably explained better by the theory (Folkman & Lazarus, 1980) that coping is not a trait but a state that differs in different situations and times.

At the same time, a comparison of the means and stanhigh stress/low achievement group (Group 3) reported more Projection than all the other groups; in the second year, it reported more Projection than all groups but the other low achievers. This group's higher Non-coping was also reduced in the second year. The low stress/low achievement group (Group 4) reported higher Denial than all the other groups in the first year but this tendency was not significant in the second year. Thus, while somewhat more continuity was seen for the coping styles for students at the extremes of achievement and perceived stress, there also appeared to be a developmental trend toward more positive coping.

Neither students' reporting of positive coping nor their positive academic appraisal (e.g., telling the interviewer that they could change the stressful academic situation by "studying more" or "asking the teacher for help") were correlated with teachers' ratings of students' academic coping behaviors.

There was, however, a strong correlation between endorsing the statement "I'm as good as anyone" in socially stressful situations and teachers' ratings of positive academic coping for boys ($r[14]= .72$, $p<.01$) but not for girls. This finding was paralleled by the correlation between positive appraisal in social situations and teachers' ratings of positive academic coping behavior for boys ($r[26]= .44$, $p<.05$) but not for girls. Feeling inadequate (i.e., endorsing the statement, "I say I'm just no good") in stressful social situations was also negatively related to teachers' ratings of positive academic coping behavior (r[14]= -.52, p<.05) for boys but not for girls.

Not surprisingly, the students in the two status groups with higher achievement (Groups 1 and 2) were viewed by teachers as using more productive academic coping and less academic projection, denial and non-coping than those in the groups with lower achievement. These students were also seen by teachers as using more positive social coping and less social projection.

Finally, how students assessed their peers in the sixth grade was compared with how students saw themselves in the seventh and eighth grades and how they were assessed by teachers. There were a number of interesting findings (Fahs, 1987), a few of which will be presented here. There was a positive correlation between positive peer scores and positive teacher ratings for boys but not for girls; for both boys and girls considered disruptive by peers, there were negative correlations with teachers assessments of positive social coping; there were also strong negative correlations between peer assessment of disruptiveness in the sixth grade and Final Grade Point Average in the eighth grade for both boys and girls. There was substantial agreement between boys and girls on which boys and girls were disruptive and isolated and which boys had positive, leadership qualities. Boys and girls indicated less agreement, however, on which girls had positive, leadership qualities, unlike the original elementary school samples on which the sociometric instrument was developed. Also, unlike the elementary school findings, there was not a negative correlation between peer-assessed "isolated" scores and achievement and only a weak correlation between positive peer scores and achievement.

Because of the very small size of the sample being reported on in this longitudinal study, it would not be appropriate to generalize the findings to other populations or contexts. Yet, the consistency of some of the findings, collected at different times over three years from different sources--the students themselves, their peers, and their teachers--leads to speculations that should be explored further. Of particular note are the correlations between boys' appraisals of social efficacy in the school environment and academic achievement. Many studies on school reform have noted the importance of more active participation and of responsibility and control by students (Dorman, 1981; Rutter et al., 1979). Yet, in most of our junior high schools, control by administrators and teachers remains the norm and, often, the expressed goal. Even now, discussions about reforms needed to stem the tide of students' dropping out of school focus primarily on making the school climate more intimate and caring and/or the academic curriculum more relevant. Little is heard about increasing students' responsibility and control in the school environment. We must begin to pay attention to what students are telling us about themselves. These students seem to be telling us that they need help in negotiating the social as well as the academic aspects of school--in dealing with the social as well as the academic stressors of school--and that the social structure of school must change to accomodate their developmental needs.

MULTIDIMENSIONAL PERCEPTIONS OF CONTROL AND AREA-SPECIFIC SELF-ESTEEM IN RELATIONSHIP TO ACADEMIC ACHIEVEMENT OF ADOLESCENTS IN AN URBAN JUNIOR HIGH SCHOOL

INTRODUCTION

This section of the study will investigate the following: 1.) the relationships between children's multidimensional perceptions of control and their academic achievement and area-specific self esteem 2.) the capacity of multidimensional control to contribute to academic achievement and self esteem 3.) the relationships between self esteem and academic achievement and 4.) the capacity of self esteem to predict academic achievement.

CONNELL INSTRUMENT

To assess children's multidimensional perceptions of control, Connell's (1985) Multidimensional Measure of Children's Perceptions of Control Scale was used. Unlike the Nowicki-Strickland (1973) scale which employs the bipolar (internal versus external) conceptualization of locus of control,the Connell instrument assesses children's understanding of reasons for their successes and failures from three dimensions (internal,powerful others and unknown). The Connell scale also assesses children's perceptions of control within and across four domains (cognitive,social,physical and general). This scale further provides a broader view of children's understanding and attributions of the reasons for successful and failure outcomes in their lives because it measures such outcomes with three dimensions of control within four domains.

ATTRIBUTION STYLES

The Connell scale's flexibility allowed this present writer to explore and measure four additional constructs/ variables of control (defensive externality,congruency, true (real) internality, and defenseless internality). In previous studies that measured children's locus of control, internals were those children who attributed their successes and failures to themselves. Children who attributed outcomes in their lives to other people were considered externals. This bipolarity (internal versus external) concept thrived in numerous studies.

However, a few researchers (Freilich, 1977 Rotter,1975; Hochreich, 1975; Procuik & Breen, 1977) differentiated externals into two types (defensives and congruents). Congruents were defined as the genuine externals who attributed both their successes and failures to powerful others. The defensives were defined as people who verbalized an external orientation by blaming others for their failures yet resembled the internals who attributed their successes to themselves.

In this present study, another group of children,referred to as defenseless internals, also emerged. They were operationalized as those who attributed successes to powerful others and failures to themselves. Given the flexibility of the Connell instrument, additional variables could be created in future studies, particularly with the unknown dimension of control; however, the present writer will report on the abovementioned variables (defensive externality, congruency, real internality, and defenseless internality).

HARE INSTRUMENT

To assess self esteem, Hare's Area-Specific Self Esteem Measure (1977), a 30-item area specific scale will be used. This scale combines ideas from the Rosenberg (1965) and Coopersmith (1967) self esteem scales, but it is more sensitive to a black population. Also, it measures home, school, and peer as well as total self esteem.

In a number of previous studies, even of whites, self esteem measures lacked differentiation or domain specificity. Previous research with the Hare instrument (Hare & Castenell, 1985; Grannis, 1984, 1985) has obtained a more differentiated result.

SAMPLE

Whereas the broader study reported in Chapter Two by Grannis, focused mostly on the last project cohort to reach eighth grade, this smaller analysis includes these students when they were in the seventh grade and the project students who were in the eighth grade at that time (1984-1985). In this special study there are seventy-seven 7th graders (38 boys and 39 girls) and ninety 8th graders (32 boys and 58 girls). The major focus will be on gender differences.

ACADEMIC ACHIEVEMENT VARIABLES

The grades from language arts, mathematics, social studies, and science courses were averaged to obtain mid-year and final grade point averages for each student. The scores from the Citywide Reading and Citywide Math tests were standardized by subtracting one year from the scores for all the children in the higher grade (adjusted test score = recorded test score - 1) in order not to confuse variance due to grade level with variance due to reading and math abilities relative to grade level.

CONTROL PERCEPTIONS AND ACHIEVEMENT

The multifaceted control attributions of Connell's instrument will be presented separately and combined in order to demonstrate the correlational and regression analyses with academic achievement. Specifically, the Connell instrument will be used by systematically adding and varying features of control (dimensions, domains, and outcomes) in relation to academic achievement

Three Dimensions

Table 91 represents relationships between the three dimensions of control (internal, powerful others, and unknown) and academic achievement variables (mid-year grade point average, final grade point average, adjusted reading achievement test score, and adjusted math achievement test score). There were no relationships for boys between internal control and achievement variables. For girls only one minimal correlation existed between internal control and mid-year grade point average (GPA) ($r = .18$, $p < .05$).

Powerful others control did not correlate with any achievement variables for boys. For girls, however, a moderate and negative correlation existed between powerful others control and reading test score (r= -.32,p<.01).

The control dimension that emerged most strikingly for both boys and girls was unknown control. Specifically, boys who felt uncertain (regardless of domains and regardless if they succeeded or failed) had lower final grades and reading and math achievement test scores(r= -.21,p<.05, r= -.24, p<.05, and r= -.24, p<.05, respectively). Similarly, girls who were uncertain had lower reading (r= -.34,p<.01) and math achievement test scores (r= -.20,p<.05).

Regression Analyses

Regression analyses indicated that none of the control dimensions considered separately were predictive of boys' achievement. For girls, however, the unknown dimension was the single best predictor in the negative direction of reading achievement test scores. Unknown control also accounted for 11.5% (p<.01) of variance in girls' reading test score.

Thus, when dimensions are considered separately, unknown control emerges as the most important dimension for boys and girls. Powerful others emerges as the second important control dimension, particularly for girls.

Three Dimensions with Success or Failure Outcomes

Correlations were performed between achievement and the three dimensions of control with success (Table 92) or failure (Table 93). Internal control combined is not consistently related to achievement for boys or girls for either successes or failures.

When failures are focused on (Table 93), only one relationship occurs.The girls' reading achievement test score and attributions for failures to powerful others are negatively related. Thus, powerful others with failures appears only for girls.

However, when the three dimensions are combined with success outcomes, unknown control shows the strongest influence. Specifically, unknown control for successes correlates in the negative direction with final GPA and reading and math achievement test scores for both boys and girls.

Regression Analyses

Regression analyses show similar results that neither internal nor powerful others with outcomes predicts achievement. In contrast, feeling uncertain for successes predicts in the negative direction math and reading test scores for both boys and girls. Feeling uncertain about the reasons for success negatively predicts boys' final GPA also. Unknown control for successes accounts for 20.9% (p<.001) of girls' reading test variance and 14.2% (p<.001) of boys' math test score variance.

Consequently, internal control for success or failure did not consistently relate to boys' or girls' achievement. Powerful others control for failure related to only girls' reading achievement. Unknown control for success showed the strongest impact in relation to both boys' and girls' achievement.

Three Dimensions in the Four Domains

Tables 94-97 reveal correlations between the three control dimensions in the four domains (social, cognitive, physical and general) and achievement variables. Internal control in the four domains was minimally and infrequently related to either boys' or girls' achievement. Powerful others and unknown control were more frequently related to students' achievement. The social and cognitive domains will be focused on for the sake of clarity.

Social Domain

Table 94 shows that for girls 3 of 4 achievement variables are negatively related to powerful other contol in the social domain. The strongest and highest correlation exists between girls' reading achievement test score and powerful others control (r= -.47,p<.001).

Cognitive Domain

Table 95 reveals unknown control in the cognitive domain relates consistently with all 4 achievement variables for boys. Also, unknown control in the cognitive domain relates to 3 of 4 achievement variables for girls. Thus, girls and boys who feel uncertain in the classroom and cannot figure out why they do or do not get good grades are less competent in reading and math achievement tests and have lower final GPA's.

Regression Analyses

When regression analyses were carried out for girls and boys, internal control in the general domain entered to predict positively girls'reading test score. Internal control in the social domain predicted in the negative direction boys' mid-year GPA. But powerful others control in the social domain was the single best predictor in the negative direction of girls' final GPA and math achievement test scores and the single best predictor in the positive direction of girls' reading achievement test score. Powerful others control in the social domain also accounted for 22.0% (p<.001) of girls' reading test score variance.

Unknown control in the cognitive domain was the single best predictor in the negative direction of boys' reading achievement test score and the single best predictor in the positive direction of boys' mid-year GPA. It also accounted for 15.5% (p<.01) of boys' reading test score variance. Similarly, unknown control in the physical domain negatively predicted girls' reading achievement test score and accounted for 18.0% (p<.001) of girls' reading test score variance. Unknown control in the general domain negatively predicted girls' reading achievement test score and accounted for 12.6% (p<.01) of girls' reading test score variance.

Unknown control in the four domains for boys and girls is quite salient. Boys and girls who feel uncertain in various domains also are basically less competent academically. Powerful others control in the social domain emerges as second most salient. Girls in particular who believe their popularity depends on the teachers or other kids also basically have lower final GPA's and reading and math achievement test scores.

Connell's Composite Dimensions

Connell (1985) derived two additional control "composites" which purported to assess the differential predictive power of internal versus external control over success outcomes and failure outcomes. These two control composites are relative internality for success (mean of internal control for success items minus mean of powerful others control for success items) and relative internality for failure (mean of internal control for failure items minus mean of powerful others control for failure items). In Connell (1985) relative internality for success was found to be one of three predictors of standardized achievement scores.

Table 98 presents correlations between achievement variables and these composites. Relative internality for success correlated strongly with girls' reading achievement test score (r= .57, p<.001). Relative internality for failure did not correlate with any achievement variables for boys or girls.

Unlike Connell (1985), the present writer thought it important to focus on these composites within all four domains. Here only one composite, relative internality for success, will be focused on.

Table 99 examines correlations between relative internality for success within the four domains. There were no relationships in the general domain and one relationship for girls only with reading test score (r=.28,p<.05) in the physical domain.

Social Domain

For girls, relative internality for success in the social domain related to 3 of 4 achievement variables. It correlated strongly with girls' reading achievement test score (r= .50,p<.001). Also, relative internality for success in the social domain correlated with 2 of 4 achievement variables for boys (r= .26,p<.05 and r= .29,p<.05).

Cognitive Domain

Similarly, for girls, relative internality for success in the cognitive domain related to 3 of 4 achievement variables for girls and strongly with girls' reading test score (r= .50,p<.001). For boys, relative internality for success in the cognitive domain correlated with only 1 of 4 achievement variables, mid year grade point average (r=.21,p<.10).

Correlations between relative internality for failure within the four domains and achievement variables were also conducted (Tables not shown). There were no relationships for boys in any of the domains. For girls, there were relationships in all the domains except the general domain.

Regression Analyses

When regression analyses were conducted, relative internality for failure in the social domain was the best predictor in the positive direction of girls' mid year and final GPA's. However, relative internality for success in the social domain predicted in the positive direction girls' reading achievement test score and boys' mid year GPA and math achievement test score. Also, relative internality for success in the social domain accounted for 25.2%($p<.001$) of variance (at step 1) in girls' reading test score, and relative internality for success in the cognitive domain accounted for 9.2% ($p<.01$) of variance (at step 2) in girls' reading test score.

Consequently, it seems that relative internality for success, rather than for failure, relates consistently to achievement. Also, the social and cognitive domains emerge as salient.

Three Dimensions for Two Outcomes in Four Domains

Correlations between achievement variables and combined control dimensions, domains, and outcomes were conducted and reveal a broader assessment. Only a few results and tables will be reported for the sake of clarity.

Social Domain

In Table 100, boys who see their success as a function of themselves also have a higher mid year GPA ($r= .27, p<.05$). There are no relationships between boys' attributing success to powerful others and achievement. Boys who are uncertain about their success, in contrast, are less competent in math achievment test scores ($r= -.39, p<.01$) and have lower final grades ($r= -.21, p<.05$).

In comparison, girls who say they are responsible for their success have higher reading achievement test scores ($r= .31, p<.05$). Also girls' attributions of their success to teachers or popular kids in class negatively relate to those girls' final grades ($r= -.19, p<.05$), reading test score ($r= -.44, p<.001$)and math test scores ($r= -.22, p<.05$). Girls who are uncertain about their success are less competent in reading ($r= -.14, p<.10$) and in math ($r= -19, p<.10$).

In Table 101, there are no relationships between internal control in failure and achievement for boys. Boys who see their failures as a function of others tend to have lower reading and math test scores (r= -24,p<.05 and r= -.22,p<.10,respectively). There are no relationships between boys' feeling uncertain for their failures and achievement variables.

Girls who see their failures as a function of themselves tend to have lower reading test scores (r= -.18,p<.10). Girls who see their failures as a function of others tend to have lower mid year grades (r= -.16,p<.10), final grades (r= -.24,p<.05), and reading test score (r= -.34,p<.01). As with boys mentioned above, there were no relationships between girls' feeling uncertain for their failures and achievement variables.

With respect to successess in the social domain, attributing outcomes to uncertainty and to powerful others is salient for boys' and girls' achievement. There was one unexpected result, which involved girls' internal control for failure relating in the negative direction with reading achievement test score.

Cognitive Domain

Correlations between achievement variables and the three control dimensions for success (Table 102) and failure (Table 103) in the cognitive domain were performed. In Table 102 for boys, internal control related to only one achievement variable, math test score (r= .23,p<.05). There were no relationships between boys' feeling others were responsible for their success and achievement. However, boys' feeling uncertain about their success correlated with all achievement variables and highly with reading (r= -.36,p<.05).

In comparison, for girls with respect to success in the cognitive domain, internal control related to all four achievement variables, the highest relationship with reading test score (r= .30,p<.05). There was one relationship between girls' feeling others were responsible for their success and reading test score (r= -.44,p<.001). However, girls' feeling uncertain about their success correlated with all achievement variables and with a high one between feeling uncertain for success and reading test score (r= -.37,p<.001).

With respect to failures (Table 103), there were no relationships between achievement variables and boys' attributing control to themselves or to powerful others. However, there were relationships between boys' feeling uncertain about their failures and mid-year (r= -.18,p<.10), final grades (r= -.16,p<.10), and reading test scores (r= -.28,p<.05).

There were no relationships between achievement variables and girls' attributing control to themselves. There was, however, one relationship between girls' attributing control to powerful others and reading test score (r= -.24, p<.05). Also, girls' feeling uncertain for their failures in the cognitive domain related to lower reading test scores (r= -.22,p<.05) and lower math test scores (r= -.15,p<.10). Additional findings for the general and physical domains (not reported here) indicated significant relationships between achievement variables and unknown control for boys and girls.

Regression Analyses

Regression analyses only for the cognitive domain will be briefly stated. For boys alone, unknown control for success accounted for 13.1% (p<.01) of reading test score variance, 7.3% (p<.05) of math test score variance, and 6.4% (p<.05) of mid year GPA variance. For girls alone, unknown control for success accounted for 12.2% (p<.01) of math test score variance. Also, unknown control for success was the single best predictor in the negative direction of most achievement variables and particularly for boys.

Consequently, in the cognitive domain for both boys and girls, there were more relationships for uncertainty, than for internal or powerful others, control for successess and failures. Unknown control for success especially in the cognitive domain also appears rather salient in its effects on achievement variables for both sexes. As boys and girls feel uncertain about the reasons why they succeed or fail, they have lower grades and achievement test scores.

Bethea's Attribution Style Constructs

As discussed earlier in this analysis, defensive externality was operationalized as one construct by combining two control subscales (internal control for success and powerful others control for failure). The additional three constructs (real internality, congruency, and defenseless internality) were operationalized as individual constructs also by combining two control subscales for each. Specifically, real internality was a combination of internal control for success and internal control for failure; congruency was a combination of powerful others control for success and powerful others control for failure; and defenseless internality was a combination of internal control for failure and powerful others control for success. To ascertain the existence of all four constructs, frequency distributions were performed, and correlational and regression analyses followed to ascertain the utility of these variables and predicted relationships between them and the achievement variables. Only a few relationships and observations regarding the two types of external (defensive externals and congruents) will be reported here.

Defensive Externality and Congruency

Correlations between achievement variables and these two constructs were performed with domains collapsed and within the four domains . When domains were collapsed (Table 104), defensive externality did not correlate with any of the achievement variables for boys or girls. On the other hand, congruency correlated with girls' reading score only (r= -.34,p<.001).

When domains were focused on (Table 105), defensive externality emerged only in the cognitive domain to relate positively and minimally to boys' math test score (r= .17,p<.10), and to girls' mid year GPA (r= .19,p<.05) and final GPA (r= .15,p<.10). However, congruency (Table 106), particularly, in the social domain related to girls' achievement. The highest and strongest correlation existed for girls only with reading test score (r= -.46, p<.001). In the cognitive domain, for girls also, congruency related to reading test score (r= -.37, p<.001).

Regression Analyses

Regression analyses indicated a different picture. Defensive externality emerged as the predictor in the positive direction of girls' reading test score.Defensive externality also accounted for 21.0% (p<.001) of girls' reading test score variance, compared to congruency which accounted for 12.0% (p<.01) of girls' reading test score variance.

Overall, there were very limited findings for defensive externality. Its relation to achievement occurred minimally and only in the cognitive domain for girls and boys.

T-Tests for Distribution of Styles Among Boys and Girls

To ascertain differences between defensives and congruents, T-tests were carried out. Defensives had higher means for mid-year GPA and math achievement test score (both $p<.10$).

Girls had a higher mean for defensive externality in the general domain($p<.05$), but boys had a higher mean for defensive externality in the social domain($p<.10$). Thus, girls,more than boys, tended to attribute successes to themselves and failures to others in the general domain. Boys, in contrast, took more responsibility for their successes and did not take responsibility for their failures in the social area of their lives.

CONTROL PERCEPTIONS AND SELF-ESTEEM

The same sequence of analyses, as previously presented for the multifaceted control dimensions, domain, and outcomes with achievement,will be presented here for self esteem. The Connell variables will be manipulated separately and combined in order to show the correlational and regression analyses with self esteem.

Three Dimensions

Table 107 represents correlations between the three control dimensions and self esteem. Compared to powerful others and unknown control, internal control does not consistently relate to boys' and girls' self esteem. The two highest correlations exist between powerful others control and girls' total self esteem ($r= -.46$, $p<.001$) and between unknown control and boys' school self esteem ($r= -.43, p<.05$). As girls attribute control to others, such as teachers and peers, their total self esteem is lower. Similarly, as boys attribute control to uncertainty, their school self esteem is lower.

Regression Analyses

Regression analyses indicate that powerful others and unknown control predict in the negative direction and account for variance in esteem for both sexes. For boys, powerful others accounted for 17.6% (p<.01) of total self esteem variance and 15.0% (p<.01) of home self esteem variance. For girls, powerful others control explained 21.5% (p<.001) of total self esteem variance, 14.1% (p<.001) of school self esteem variance, and 15.5% (p<.001) of home self esteem variance.

In addition for boys, unknown control accounted for 18.6% (p<.01) of school self esteem variance. For girls, unknown control explained 8.5% (p<.01) of peer self esteem variance.

These results demonstrate the impact of powerful other and unknown control, rather than internal control, on boys' and girls' self esteem. For girls, powerful others control seems most important, and for boys unknown control appears most important.

Three Dimensions and Success and Failure Outcomes

Correlations between self esteem and dimensions combined with outcomes were performed (Tables not shown). Powerful others and unknown, rather than internal, control for success and failure outcomes related to more of the self esteem variables.

For girls, powerful others control for success and total self esteem were negatively and strongly related (r= -.46,p<.001). For boys unknown control for success highly and negatively related to total self esteem (r= -.38,p<.01) and school self esteem (r= -.38, p<.01). Therefore, as girls attribute their success to others, their total self esteem is decreased. As boys attribute their success to uncertainly, their total and school self esteem are lower.

In relation to failures, for girls powerful others control correlated highly with total self esteem (r= -.38,p<.001), and for boys powerful others control correlated highly with school self esteem (r= -.36,p<.05. A second high correlation for boys occurred between unknown control and school self esteem (r= -.32,p<.05).

Regression Analyses

Regression analyses showed similar results. For girls, powerful others control for success best predicted in the negative direction all four self esteem variables and accounted for 21.6% ($p<.01$) of girls' total self esteem variance. For boys, powerful others control for success best predicted in the negative direction self esteem variables. Unknown control, however, best predicted in the negative direction peer self esteem.

When outcomes are focused on, powerful others and unknown control, rather than internal control, are important. Powerful others control for both outcomes also seems slightly more predictive of girls' self esteem. Also, powerful others and unknown control for success, rather than for failure, seem more consistently related to boys' and girls' self esteem.

Three Dimensions in Four Domains

Relationships between self esteem and the control dimensions within the social, general, cognitive and physical domains were performed (Tables not shown). Internal control emerged within all four domains particularly for boys in the social domain and for girls in the general domain. Specifically for boys in the social domain, the highest correlation existed between internal control and school self esteem ($r= -.33$, $p<.05$). For girls in the general domain, the highest correlation existed between internal control and total self esteem ($r= -.35, p<.001$). These negative relationships were unexpected.

In comparison, powerful others was consistently related to self esteem. For boys, in the physical domain 3 of 4 self esteem variables were related to powerful others control, and for girls, all were related to powerful others control. The highest correlation for boys' attributing control to powerful others in the physical domain occurred negatively with school self esteem ($r= -.39, p<.01$). The highest correlation for girls' attributing control to powerful others in this domain existed negatively with total self esteem ($r= -.38$, $p<.01$).

In the general domain, powerful others related to 3 of 4 esteem variables for boys, and to all esteem variables for girls. The largest correlation for boys occurred between powerful others and school self esteem ($r = -.35, p < .05$) and the largest for girls existed between powerful others control and total self esteem ($r = -.38, p < .001$).

In the cognitive domain for boys only, powerful others control did not correlate with any self esteem variables. In contrast, for girls powerful others control correlated with all four self esteem variables. The highest correlation that existed between girls' attributing control to powerful others in the cognitive domain occurred with home self esteem ($r = -.42, p < .001$).

In the social domain, for boys, powerful others control related to all esteem variables and to 3 of 4 esteem variables for girls. The greatest relationship for boys existed between powerful others control and total esteem ($r = -.42, p < .01$). For girls, the greatest relationship was between powerful others control and school self esteem ($r = -.33, p < .05$).

A similar picture unfolded with respect to unknown control within domains. For boys in the physical domain, unknown control related only to one self esteem variable, school esteem ($r = -.26, p < .05$). For girls, however, unknown control in the physical domain related to 3 of 4 esteem variables, and the largest correlation existed with home esteem ($r = -36, p < .01$).

In the general domain, unknown control did not relate to any esteem variables for boys. In contrast, for girls, unknown control correlated with 3 of 4 esteem variables, the highest with peer self esteem ($r = -.27, p < .01$).

In the cognitive domain for boys, 3 of 4 relationships between unknown control and self esteem existed, and the highest relationship was with school esteem ($r = -.36, p < .01$). For girls, unknown control related to all self esteem variables. The highest and strongest relationship with unknown control in the cognitive domain occurred for total esteem ($r = -.39, p < .001$).

In the social domain, unknown control correlated with all self esteem variables for both boys and girls. For boys in particular these correlations were very strong and high (total, $r = -54, p < .001$; school, $r = -.50, p < .001$; home, $r = -.50, p < .001$). For girls, the correlations between unknown control in the social domain and esteem were not as large, but the largest occurred with peer self esteem ($r = -.37, p < .001$).

Regression Analyses

Regression analyses for the three dimensions in four domains with self esteem provide further explanations. The results will be presented within each domain.

Physical Domain

For boys powerful others control explained 14.5% ($p<.01$) of total self esteem variance and 10.5% ($p<.05$) of home self esteem variance and 14.9% ($p<.05$) of school self esteem variance.

For girls powerful others explained variances is total (14.8%, $p<.001$), school (6.5%, $p<.05$) and peer (13.1%, $p<.001$). Unknown control explained 12.0% ($p<.001$) of variance in home self esteem. Powerful others control more consistently explained the variances in self esteem for both boys and girls.

General Domain

For girls internal control explained 10.0% ($p,>01$) of school esteem variance. For boys powerful others control explained 12.0% ($p<.01$) of school self esteem variance.

Cognitive Domain

For girls unknown control explained 14.9% ($p<.001$) of total self esteem variance, 7.8% ($p<.01$) of school self esteem variance and 7.6% ($p<.10$) of peer self esteem variance. For boys unknown control explained 9.8% ($p<.05$) in total, 13.4% ($p<.01$) in school and 4.4% ($p<.10$) in peer self esteem variance. Thus, unknown control in the cognitive domain more frequently explained variance in self esteem.

Social Domain

For boys unknown control accounted for 29.2% ($p<.001$) of total self esteem variance, 25.0% ($p<.001$) of school self esteem variance and 24.7% ($p<.001$) of home self esteem variance whereas powerful others control accounted for 8.3% ($p<.05$) of peer self esteem variance.

For girls unknown control accounted for 12.0% ($p<.001$) of total, 5.8% ($p<.05$) of home and 13.9% ($p<.001$) of peer self esteem variances whereas powerful others control accounted for 10.6% ($p<.01$) of school self esteem variance. Unknown control in the social domain, therefore, accounted for most of the variances in self esteem particularly for boys.

In sum, internal control within the four domains did emerge slightly to relate to boys' and girls' esteem and to explain variance in girls' school self esteem. However, powerful others and unknown control more consistently related to and accounted for the variance in boys' and girls' self esteem. Also, the social domain emerged to account for a considerable portion of the variance in self esteem.

Relative Internality for Success and Failure

Relative internality for successes and relative internality for failures were correlated with self esteem (Tables not shown). For boys and girls relative internality for successes consistently related to self esteem. Relative internality for successes related highest with boys' and girls' total self esteem ($r=.38, p<.01$ and $r=.44, p<.001$, respectively). For girls only, relative internality for failures related low and positive to total, school, and home self esteem.

When domains were considered, the following resulted. A few findings are reported within the domains.

In the physical domain, relative internality for successes relates to all self esteem variables for girls and to two variables for boys (total $r=.30, p<.05$ and peer $r=.30, p<.05$). Also, for girls relative internality for successes, especially in the social and cognitive domains, related to self esteem. However, in the social domain the second largest and strongest correlation with relative internality for success related to boys' peer self esteem ($r=.38, p<.01$). The largest and strongest correlation in the cognitive domain that existed appeared with girls' home self esteem ($r=.40, p<.001$).

It also seemed that relative internality for failures related to esteem variables for the girls in the physical, social and cognitive domains. There were no relationships between relative internality for failure and esteem variables for boys.

Regression Analyses

Regression analyses were conducted to ascertain the capacity of these two composites to predict self esteem. For girls in the cognitive domain, relative internality for success was the best predictor in the negative direction of total and home self esteem. In the social domain, relative internality for success best predicted in the positive direction girls' school self esteem. However, in the physical domain, relative internality for failure was the single best predictor in the positive direction of girls' peer self esteem.

In contrast, for boys there were no variables that predicted school or home self esteem. Relative internality for success in the physical domain positively predicted boys' total self esteem. Relative internality for success in the social domain positively predicted boys' peer self esteem.

Thus, relative internality for success and for failure operated to predict self esteem particularly for girls. Relative internality for success, rather than failure, predicted self esteem for both boys and girls. When domains were focused on, the social, cognitive and physical appeared more frequently in relation to esteem, for girls in particular.

Three Dimensions for Two Outcomes in Four Domains

The three dimensions for success and for failure within the four domains were correlated with self esteem (Tables not shown). The results will be reported in the context of domains and followed by a short summary of salient outcomes and dimensions within each domain for the sake of clarity.

Social Domain

The largest and strongest correlation for girls was between peer self esteem and unknown control for success ($r= -.37, p<.001$). For boys, the largest correlation existed between total self esteem and unknown control for success ($r= -.56, p<.001$).

Also, with respect to outcomes, success, rather than failure, correlated consistently with boys' and girls' esteem. With respect to dimensions, powerful others and unknown, not internal, control tended to relate to boys' and girls' self esteem.

Cognitive Domain

The largest correlation for girls occurred between powerful others control for success and home esteem (r= -.44,p<.001). For boys, the largest correlation occurred between unknown control for success and school self esteem (r= -.32,p<.05).

In relation to outcomes, success slightly outweighed the number of correlations for failure. Also, correlations with unknown control for success, particularly for girls, slightly outweighed number of correlations for powerful others control.

General Domain

The highest correlation for girls existed between powerful others control for success and total self esteem (r= -.39,p<.001). For boys, the highest correlation existed between powerful others control for success and school self esteem (r= -.40,p<.01).

There were more correlations with success, rather than failure, for girls. There were no relationships between success and self esteem for boys. In relation to dimensions, internal control for success and failure emerged more frequently for girls, rather than for boys. Also, for girls, powerful others control for success operated more frequently.

Physical Domain

For girls the relationship between powerful others for failure and total self esteem (r= -36,p<.001) was the strongest and largest. For boys, the correlation between powerful others for failure and school self esteem (r= -.38,p<.01) was the strongest and largest.

With respect to outcomes, there were slightly more correlations between failures, than successes, for the boys only: Also, for boys only, internal control emerged to relate to self esteem variables.

However, in relation to dimensions, powerful others for success and failure, especially for girls, correlated more consistently with self esteem variables.

Regression Analyses

Regression analyses showed similar results with respect to outcomes and dimensions. Unknown control for success in the cognitive domain was the single best predictor in the negative direction of both boys' and girls' school esteem.

Thus, success, rather than failure, more frequently predicted esteem variables. The unknown and powerful others control dimensions tended to predict esteem for boys and girls. All domains emerged to broaden the perspective of the impact of control in the context of esteem variables such that as students feel uncertain about outcomes or attribute outcomes to powerful others, they also tend to feel unaccepted by classmates, teachers, and parents.

Attribution Style Constructs

Numerous correlations and regression were performed between self esteem variables and the four constructs (defensive externality, real internality, congruency, and defenseless externality). Only a few results in relation to congruency and defensive externality will be reported here.

Defensive Externality versus Congruency

Table 108 shows correlations between defensive externality and congruency with self esteem variables. The results indicate slightly more and higher correlations between congruency and esteem variables. The highest relationship exists between congruency and total esteem for boys and girls, respectively ($r= -.44, p<.05$ and $r= -.45, p<.01$). Regardless of domains, boys and girls who attribute their success to powerful others and attribute their failure to powerful others (congruents) have lower self esteem in total.

For boys and girls, defensive externality relates to all self esteem variables except peer self esteem. In relation to this construct, the largest correlation for girls appears with home esteem ($r= -.30, p<.05$), and for boys appears with school esteem ($r= -.34, p<.05$).

When domains are considered (Tables not shown), a larger picture emerges. But only a few results will be highlighted. In the social domain, congruency, more than defensive externality, relates to esteem. The highest correlation for boys exists between total esteem and congruency ($r= -.42, p<.05$). The highest correlation for girls occurs between school esteem and congruency ($r= -.32, p<.05$). In the social domain there were no relationships between esteem and defensive externality for girls.

In the cognitive domain congruency does not relate to any of the esteem variables for boys. However, for girls, it relates to all four esteem variables, the strongest and highest relationship for congruency occurs with girls' home self esteem ($r= -.42, p<.001$). Defensive externality in the cognitive domain does not relate to boys' esteem. However, it does relate to girls' home esteem, ($r= -.21, p<.05$) which was the highest correlation between this construct in the cognitive domain and esteem.

In the general domain, congruency relates highest with boys' school esteem ($r= -.34, p<.01$). There are 3 of 4 correlations for boys between congruency and esteem variables. Congruency relates highest with girls' total self esteem ($r= -.37, p<.001$) and congruency relates to all four esteem variables for girls. Defensive externality in the general domain correlates with only 1 of 4 esteem variables for boys and to 3 of 4 for girls. The only correlation for boys occurs with school esteem ($r= -.26, p<.05$). The largest correlation for girls occurs with home esteem ($r= -.33, p<.05$).

In the physical domain, congruency relates to 3 of 4 esteem variables for boys, and the largest exists with both boys' total and school esteem ($r= -.38, p<.05$). For girls, congruency in the physical domain relates to all four esteem variables, and the highest relationship for girls occurs with total esteem ($= -.38, p<.001$). Defensive externality in the physical domain relates to 2 of 4 esteem variables for boys. The highest was with school self esteem ($r= -.24, p<.05$). For girls, however, all four esteem variables relate to defensive externality. The largest for girls was between defensive externality and total esteem ($r= -.25, p<.05$).

between school self esteem and mid year GPA (r= .41,p<.01). Consequently, boys who have high mid year GPA also feel accepted at school. However, boys who feel accepted at school have low reading test scores (r= -.40,p<.01). The two negative relationships between reading test score and total and school self-esteem were contrary to expectations.

Regression Analyses

When regression analyses were examined, school self esteem, as expected, consistently predicted boys' and girls' mid year GPA in the positive direction, boys' reading test score in the negative direction, and girls' final GPA in the positive direction. School self esteem also accounted for 17.0% (p<.05) of variance in boys' mid year GPA, 17.0% (p<.001) of variance in girls' mid year GPA, 16.0% (p<.05) in boys' reading test score, and 17.0% (p<.001) in girls final GPA. Boys' and girls' achievement was impacted by acceptance or non acceptance at school.

Contrary to expectations, total self esteem predicted boys' final GPA in the negative direction and girls math test score in the positive direction. Total self esteem also explained 15.0% (p<.05) of variance in boys' final GPA and 16.0% (p<.001) of variance in girls' math test score.

Also, unexpectedly, home esteem predicted girls' reading test score in the positive direction and explained 18.0% (p<.001) of the variance. Girls who feel accepted by parents also have higher reading test scores.

Thus, school self esteem tended to relate consistently to boys' and girls' achievement either positively or negatively. Total esteem infrequently but negatively influenced boys' achievement and infrequently but positively influenced girls' achievement.

DISCUSSION OF FINDINGS AND IMPLICATIONS

In this study of black boys and girls, there were more relationships between achievement and attributions to uncertainty and powerful others, rather than to internal, control. Uncertainty, however, was the most salient control perception that emerged. The more uncertain these students felt in the classroom and could not figure out why they did or did not get good grades, the lower their grades and standardized test scores. Similarly, their not knowing the causes for situations occurring in various areas of their lives contributed to their feeling less acceptable at school and home as well as with their peers.

In addition, successes, rather than failure, were more consistently related to these students' achievement and self esteem. A higher number of success correlations were observed for girls especially. Girls also tended to have a slightly higher number of failure relationships with achievement and esteem variables. The essential point here is that as black boys and girls tended to respond to successful outcomes, the effects were strong on those students' achievement and self esteem.

In the social domain, boys had the stronger and higher number of relationships with achievement and self esteem. In the cognitive domain, girls had the stronger and greater number of associations with achievement and esteem. With respect to domains, the perceptions of control in the social domain were as salient as those in the cognitive domain. Furthermore, the decision to observe Connell's two composites within each of the four domains proved to illuminate the importance of the social milieu in relation to achievement. The social domain's importance manifested the influence that managing interactions with peers and teachers can have, especially for these black boys and girls. The limited relationships involving defensive externality in the cognitive domain and congruency in the social domain also addressed the significance of domain-specificity and the social domain in particular.

However, the limited findings for defensive externality, in comparison to the other constructs necessitate some reconsideration. Perhaps these limited findings can be explained by the weak effects of defensive externality's control subscales (internal control for success and powerful others control for failure). Specifically, internal and powerful others control dimensions, as indicated earlier in this study, showed weak effects, in comparison to the unknown control dimension. Perhaps the vital component for defensive externality is internal control for success and unknown control for failure, rather than or in addition to, powerful others control for failure. Yet since internality is still weak, this suggested combination may not reveal broader or specific findings in relation to operationalizing defensive externality. This present writer raises this question as a proposition for further research particularly in relation to the investigation of attributions of control involving black students.

In addition, although these findings are limited, some further speculations seem warranted. For instance, the limited but positive association between defensive externality and grades might suggest how defensive externality functions as a protection for some students as they attempt to negotiate their and others' spaces in the context of a chaotic and intrusive environment. It may be more healthy and realistic to maintain a defensive stance within such an environment, rather than to blame oneself.

Lastly, with respect to the study of non-whites and attributions of control a brief discussion is warranted, possibly as a postscript. In previous empirical studies, Blacks have been labeled prevalently as external. The total patterns of findings in this study, however, provide a different profile of urban black students. Perhaps the importance of uncertainty among these students manifests the intensity and frequency of environmental and intrapsychic "insults" that numerous Blacks (and other non-whites) experience as a function of discrimination.

Helms (1983) argues that Rotter's locus of control theory is "culture blind, useless, and harmful" because it does not account for the realistic discrepancy between attainment levels and ability, given the constraints of discrimination. Others (Caplan & Nelson , 1973; Sue, 1978) argue similarly. Perhaps the frequency of uncertainty responses reflects the discrepancy these urban black students experience within their life domains.

Uncertainty and power are salient issues in this population. The fact that these black students consistently differentiate the unknown dimension is a meaningful fact.

On the other hand, the prevalence of uncertainty might reflect these students' awareness of what Sampson (1988) very skillfully delineates as freedom, responsibility, and achievement from the perspective of ensembled, rather than self-contained, individualism which views the relational aspects of individuals. He argues that internal locus of control and external locus of control (two fields or systems of forces) fail to account for the "collectivistic" or the less self-contained and less self-interest point of view. Grannis (1988) also argued that empirical measures intending to assess control, particularly within groups with less power, would need to include items that addressed not only the individual but also the individual in relation to the collective.

CHAPTER FOUR

INDIVIDUAL CASES

The general trends and processes that the statistics indicate abstractly provide a framework in which to interpret individual cases and specific events. The configurations of variables will be more unique in individual cases, but in turn throw light back on the more general patterns. Consider, for example, five children who entered the project in the sixth grade, Gerise, David, Charles, Austin, and Keith. (The names to be used here are fictitious, but are the same as the names used for these children in observations reported in Chapter One.) The first three had relatively external scores on the Nowicki-Strickland in the sixth grade. These three, but particularly Charles, reported a higher frequency of stressor events in the sixth grade than the average for the cohort at that time. Keith also had a more external Nowicki-Strickland score, but in sixth grade perceived a lower frequency of stressor events. Austin's Nowicki-Strickland score was average for the cohort in the sixth grade, and he reported experiencing a relatively low frequency of stressor events.

Gerise

Throughout grades six to eight, it was often evident from the expressions on Gerise's face and the tone of her voice that she was reacting strongly to events in class. In an interview designed by Fahs (Fahs, 1987), Gerise identified a variety of things that upset her in the school, using the expression, "It really gets me mad!" Gerise's very high Stressor Appraisal scores in all three grades--4.50 in grade six, 4.06 in grade seven, and 4.31 in grade eight--were consistent with these responses. Gerise was teased a lot for her size, but she performed a solo dance very gracefully in an eighth grade show and was applauded by her peers. The frequency of stressor events increased for Gerise in seventh grade, and then decreased to its lowest level in eighth grade, though it was still higher than the class average in eighth grade. The level of distress she reported at this time was average for the grade. Her total Self-Esteem tended to be average for the cohort each time it was measured; it was consistently low in the peer domain, while it shifted from high to average in the home domain and from average to very high in the school domain. During all of this time, Gerise lived with her father, with whom she shared responsibilities for getting meals and keeping up the apartment. Her initial hope that her father would remarry was disappointed.

Gerise regulated her involvement in disruptive classroom events very carefully. On many occasions, she watched what was happening without participating verbally, though if the students in a class were generally disregarding a teacher and interacting with each other, Gerise did so too. Gerise rarely challenged teachers directly, but on one occasion when a teacher she did not respect had accused her of something she said she was not doing, she "told him off to his face." Gerise's teacher ratings for Positive Behavior, collected in the seventh grade, totaled 150, which can be compared with the average of 108 for the boys and 143 for the girls. Her Negative Behavior rating was 54, which compares with an average of 68 for the boys and 54 for the girls. She was,then, average for the girls on both measures, but was rated more favorably than the average for the boys. Her locus of control score remained relatively external, 17, in the seventh grade.

Gerise was 14.3 years old in the middle of seventh grade and was thus a year older than expected. Her reading test average was more than a year below grade level, while her math test average was slightly above grade level. Gerise's midyear grade point average of 75.0 was average for the girls. Her average at midyear in sixth grade had been 80.0 and in seventh grade it was 78.8. Gerise's math ability, and whatever pro-school behavior and attitudes this might represent, seems to be one of the strongest factors in support of her achievement in school. She also illustrates the finding that strong Stressor Appraisal was particularly protective for students with a more external locus of control. Gerise got into the high school of her choice, and reported that she was "loving" it. She passed all but one of her courses in the first semester of ninth grade, though she reported at this time that her biggest problem in school was to keep from failing.

David

David related in the Fahs interview that what upset him most in school was people picking on him "cause I'm small." He said on that occasion that he walks away and hopes people won't bother him. In one observation, a bigger boy was chasing David and he hid behind a screen, manifestly hoping that the boy would give up, though the boy in chase clearly knew where David was. He was rather excitable in class. David's Stressor Appraisal score in sixth and eighth grade, 3.75 and 3.50 respectively, was about average for the boys in those years, but it had dropped to 3.31 in the seventh grade. Stressor Frequency for David was higher than the class average in all three grades, and his Distress score, 32, was higher than the class average of 29. His total Self-Esteem was consistently somwhat low for the cohort, especially Peer Self-Esteem.

David interacted a lot with a couple of other small boys in class, and with Charles, who was of average height and weight. They often drew cartoons together and read each other's original comic books. The group seemed to be a refuge from the larger boys. Teachers frequently reprimanded David for talking, though David seemed to regulate his attention selectively. One time when he was drawing with another boy, the teacher wrote a new word on the board and pronounced it, "quadrilateral." David, in sequence, pointed to his friend and the word, put his finger on his lips, got out his notebook and wrote the word down, and then returned to his drawing. David talked back to teachers from time to time, and once passionately defended a classmate from the teacher's accusation that he smelled, saying maybe it was the teacher herself that smelled so bad. His Positive Behavior score was 92, lower than the average for the boys, while his Negative Behavior score was 67, virtually the same as the average for the boys.

David was only 12.3 years old in the middle of seventh grade, younger than the average for his class and indeed for seventh grade. His reading score was on level for his grade, while his math score was a year and a half below level. David's locus of control score shifted from 18 to 12 between sixth and seventh grade. His eighth grade midyear grade point average was 74.0, above average for the boys.

In the sixth grade his midyear average had been 82.3, and in the seventh grade it had fallen to 66.3, in parallel with the drop in Stressor Appraisal. He was admitted to a general high school, rather than the special art school that he wanted. The school had a very difficult environment, and he passed only half of his courses during the first semester. In view of his low math test scores, David's shift to internality seems to have been crucial to his survival in intermediate school, perhaps coupled with his average (rather than below average) appraisal of stressor events in sixth and eighth grade.

Charles

Charles, in the Fahs interview, also cited other students' picking on him as particularly upsetting. When he was asked what he then said to himself, he replied, "I shouldn't have gotten myself into this situation." This was a characteristic response for Charles, who regularly talked about what he should do as a solution to problems he was having. It might sound internal, but his behavior was more external. Charles was responsive to adults when they made demands on him in school, and responsive to his friends, the person that was closer or more assertive being the one that Charles was likely to be most influenced by. Charles avoided conflict with his teachers. In the seventh grade, he started to grow bigger than his friends, though still not as big as the larger boys in class, and he began to withdraw from classes and hang out sometimes in the hallway. His Stressor Appraisal score dropped from 4.13 in sixth grade, which was high for his grade, to 3.25 in seventh grade and then to 3.00 in eighth. Stressor Frequency for Charles was very high both in the sixth and the seventh grades, and then dropped to the same level as Gerise and David in eighth grade, which was still higher than the class average. Charles's distress score was average for the class. His total Self-Esteem was initially quite low for the class, especially Home Self-Esteem, but it became average the last time it was measured. During this time, Charles moved from his mother's home to his sister's home, where two young cousins were favorite playmates of Charles.

The Positive Behavior score for Charles was 136 and the Negative Behavior score was 48, ratings that were significantly more favorable than those for the boys and about the same as the average for the girls. Charles was 14.1 months in the middle of seventh grade, and so was older both than the average for the cohort and than expected for the grade. His reading test score average was the second highest of the five children discussed here, 8.6, while his math test score, 6.6, was a year below grade level, lower than Gerise's but higher than David's. Charles's eighth grade midyear grade point average was 60.0, reflecting two courses he barely passed and two he failed for cutting classes. His midyear average in sixth grade had been 75.7, and in seventh grade it had fallen to 66.3. Charles did not get into the special art school he wanted to attend along with David, and in a very destructive high school he failed all of his courses the first semester. Charles told an interviewer at this time that when he sets out to school, he has in mind that he is going to go to his classes and learn, but that as soon as he enters the door, he "becomes a different person." The school is large, there are crowds of kids in the halls on the way to his classes, no one student who is his friend is in more than one of his classes, and so forth. His responding on his eighth grade THIS that the stressor events "make no difference" seems to represent denial, withdrawal, and defeat all at once. In combination with his externality, Charles is very unprotected in a harsh secondary school environment.

Austin

When asked if he could think of something that really bothered him in school, Austin replied, "Not really, just the throwing of food in the lunch room." He said that when fighting starts, he usually got up and walked out to "go sit in my room with my homeroom teacher." This matched what Austin was often observed to do, for example, on one occasion in the eighth grade when the boys in his class were racing down the hallway, inviting trouble, and he lagged behind with the girls. On an earlier occasion, however, Austin returned to class from a trip to the bathroom, found his books spilled on the floor, asked angrily who had thrown his books on the floor, and moved toward the boys in the back row, making menacing gestures and faces at them. Austin was never observed to be attacked again after this incident. He had many friends among both the boys and the girls. Austin was tall, broad shouldered, good-natured and observant. For an end-of-the-year party the project sponsored with the homeroom teacher, when all of the students in the class received a certificate of commendation, the teacher wrote on Austin's, "A perfect gentleman." He was very pleased and declared he was going to frame it and hang it in his bedroom. He was a strong example of a kind of androgyny that project staff concluded was important for the boys's success in the school, an ability to get along with the other boys and simultaneously to relate to the teacher in a way that was more characteristic of the girls.

Austin's Stressor Appraisal score of 3.25 was below average for the boys in the fall of the sixth grade, but it jumped up in the spring and remained at a relatively high level for the boys, 3.94; during this same time span, the average Stressor Appraisal for the boys was declining.

Austin's Stressor Frequency was consistently somewhat lower than the average for the class. His Distress score of 20 was substantially lower than the class average of 29, and his total Self-Esteem moved from average during sixth grade to above average during seventh and eighth grade, the change being accounted for entirely by his moving from average to above average in Peer Self-Esteem during that time, commensurate with the high levels of Home and School Self-Esteem that obtained for Austin throughout. Austin was 14.3 years old in the middle of seventh grade, virtually the same age as Gerise and Charles. His Nowicki-Strickland score was 14 both times it was measured, in the sixth and the seventh grade; the first time, this was slightly more internal than the class average, and the second it was level with the class average. The teachers' rating of Positive Behavior was 164 for Austin, compared with the average of 108 for the boys and 143 for the girls. His Negative Behavior rating was 46, which compares with an average of 68 for the boys and 54 for the girls.

Austin's composite reading test score in the seventh grade was 8.7, and his math score at this time was 7.7. He was possibly above grade level in reading and was on grade level in mathematics at this time. Austin's grade point average at midyear in sixth, seventh, and eighth grade respectively was 74.3, 71.3, and 81.0--which might tell as much about how difficult it was to get a good grade in this school as about

Austin's academic performance. Austin got into the school of his choice, a selective high school affiliated with a CUNY college. During the first semester, he was enthusiastic about high school, reporting that it was hard, but that "If you have a problem, they don't just tell you to handle it, they take time to help." He was also supposed to be receiving tutoring in connection with participating in a community choir, but, according to Austin's mother, it kept him from his studies for several hours and the tutors often did not show up. By the end of the first semester, Austin was receiving low grades in several of his subjects.

A further note about Austin adds an extraordinary dimension to this case. His mother came in one time to visit project staff at the school and said how pleased she was that he was doing well. She had been concerned about he would handle a regular classroom. Austin had been in Special Education for a number of years. At age 2, he had had a tantrum in a doctor's office, no one could control him, so he was put in a special program, which in elementary school the mother found out was special education. However, an older brother committed suicide, it was Austin who found him, a psychiatrist "got him crying all the time" (relieving depression?), the special ed teacher could not handle Austin, and then Austin was transferred to a regular classroom. He went to another psychiatrist who helped Austin take control of his own life. The psychiatrist told the mother at the end of the treatment, "Austin is ready to leave, he doesn't need me any more." Austin improved in school from that time on. Now, at the time of the mother's first visit, she said Austin's remaining older brother was constantly bringing home knives and drugs and threatening her and that Austin had to fight to defend himself and her from his violence. Austin did homework at home, but did not have much time for anything else except the fighting. Austin's mother came to school several times following this first interview, and mother and son always could be observed to be supportive of each other. Austin appears to be a classic instance of the resiliant child, not literally "invulnerable," but rather one who could be helped and who could overcome tremendous obstacles. Nonetheless, Austin, at the time of this writing, has not been promoted to the tenth grade and is very discouraged.

Keith

All four of the children written about above had Negative Behavior ratings that were average or below. By definition, there were as many children with negative ratings above average as below, and we shall write about one of them here. When Keith was asked, in the same seventh-grade interview cited at the outset of the previous case studies, which things that happen in school are most upsetting, he named a teacher and "some of the kids in the eighth grade." Why the teacher, he was asked? Keith replied, "Like when we be coming from our next class and we be coming out of there late and she just yell at you and don't give you time to tell her what is going on, she just yell at you and stuff. Sometimes she won't even let you in." When asked what he thinks to himself in that situation, he answered, "I'm not going back to that class." This was indeed the solution for Keith on various occasions, as he stormed out of class, came late to class, or cut class altogether. It may be remembered that Keith left the computer class with Ms. Wallace (Chapter 1) shortly after observing to the teacher, "You get on my nerves." It will also be recalled, however, that Keith responded very positively to Mr. Thomas's teaching of the same computer class a week later. Here he urged his peers to pay attention, something he was frequently heard to do in class during all three years in intermediate school. One time when one of the teachers pitted several teams against each other in a cooperative learning mathematics competition, Keith angrily challenged the answers of students from other teams and strenuously exhorted his own team to win, which in fact they did.

Keith's Stressor Appraisal in sixth grade was 3.63, somewhat below the average for the boys at that time, it fell to 3.25 in seventh grade, parallel to the decline for the boys generally, but then it rose in eighth grade to

3.88, significantly higher than the mean for the eighth grade boys. Keith perceived significantly fewer stressor events in the sixth and seventh grade than the boys generally, but again in eighth grade Stressor Frequency was higher for Keith than the average for the boys. Indeed, making it to graduation was a serious concern for Keith in the eighth grade, and he connected it at this time with classroom behavior. This is not to say that school achievement did not matter to Keith from the beginning. When he accidentally saw his reading test score in sixth grade, and thought 6.9 (slightly above the expected 6.7) was not high enough to pass to seventh grade, he picked up three desks and hurled them across the room, shouting successively, "F--- the school! F--- New York City! F--- America!" It was this very compounding of the desired and the unacceptable that characterized so much of Keith's behavior in school, again as illustrated in the account of the class with Mr. Thomas. Our notes are full of incidents like the following: when Keith's official class is moved from a room that the teacher has decorated splendidly to a room that is neglected and poorly furnished, Keith and several other students destroy the room they are leaving, Keith saying, "Why should we let this room be more beautiful than the one we have to go to?"--while several days later, when the class has returned to its new room (still with the same official class teacher), Keith comes in early, straightens up chairs and desks, saying, "These other kids are dirtying up our room"; a knife the homeroom teacher has to cut a cake for a birthday party in class is too small, so Keith pulls out a six inch blade, which does the job; Keith is reading Love and Sex in Plain Language during a geography lesson, and when the teacher calls on him to tell what the weather is like at the equator, he looks up and defines the equator; Keith comes into computer class late, interacts loudly first with a girl and then with a boy to get paper for the assignment, and at the end of class hands the teacher the completed work.

Keith's Distress score in the fall of eighth grade was 29, average for the boys and for the cohort. His total Self-Esteem fell from average for the class in the spring of sixth grade to well below average a year later in seventh, the biggest drop occurring in Home Self-Esteem. In an interview in sixth grade when Keith's mother came to school, she said, "It seems like everytime you say something to him, depending on the tone, he takes it personally and gets angry." The mother said she was unable to control Keith, and told about Keith's losing a job with a relative in a butcher shop because he did not do what was expected. Keith's score the one time he took the Nowicki-Strickland, in the sixth grade, was 18, significantly more external than the class average. On this instrument, in response to the item that asked, "Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?," Keith circled "Yes" and penciled in, "Not in ______ (name of his community)." Keith's Positive Behavior score from the teacher ratings was 86, very much lower than all of the other case students except David, who scored 92. His Negative Behavior score was 88, significantly higher than the class average and all of the other case students.

Keith was 14.9 years old at the end of first semester in seventh grade, and was thus the oldest of our five case students. His composite reading test score in seventh grade was 7.8, the expected level for the grade, though not for his age, while his composite math test score at this time was 7.1. Keith's grade point average at midyear in sixth grade was 77, in seventh grade it fell to 60, and in eighth grade (which he was admitted to after being retained in seventh grade for a couple of months) it was 70. We have not been able to follow Keith to high school. In the last semester of the eighth grade, he suddenly disappeared. We were told that he had gone or been sent to another state, possibly to escape a drug dealing situation in which he was implicated. The school graduated Keith, but he did not attend and had not been seen at school for several months.

As of this writing, a year and a half after the students entered the ninth grade, only Gerise has been promoted to the tenth grade. Not one of the boys we described earlier has been promoted to the tenth grade, in any of the three high schools that they attend. It is unlikely that Keith has made it to the tenth grade, or to high school for that matter. All of these youths were intelligent and loveable. Their observable behavior and their responses to project instruments formed a coherent whole for each individual. One feels strongly that when it is possible to view students as comprehensively as the project has allowed us to see these, that it should be possible to intervene on their behalf. This, however, has turned out to involve many factors in both the school and the home, fundamentally perhaps in the economy, that are beyond the resources of the project and that require, at the least, an educational system that is much more responsive to the needs and strengths of individual children and youths than the one in which these young people were students.

CHAPTER FIVE

THE MEANINGS OF OUR FINDINGS: PATTERNS AND INTERPRETATIONS

At a time when research on students' stress in school was almost entirely confined to studies of test anxiety, this project set out to explore in an intensive way students' experience of social, physical, and academic stressors in a school environment. The project concerned itself both with the impact of school stress on students' achievement and psychological health and with possible moderators of this impact, particularly social support, coping style, and locus of control. A tremendous amount has been learned that cannot be easily summarized. On the other hand, stepping back from the myriad details to find the larger patterns leads to yet new understandings. This chapter will pull together some of these patterns from this present and earlier reports, and will push toward further configurations and insights.

The pervasiveness of stress in the school

Our speaking of stress per se harkens to the distinction we have made at various points between stressor events and stress as a reaction to those events. A person or system is said to be stressed when the press of conditions and events is greater than the system's capacity to endure things safely and comfortably. The project's journals over three and a half years in a single school show that a day never went by, in fall, winter, or spring, when stressor events did not result in manifestly distressed reactions of individuals and groups in the school. Our sense is that the density of these events and reactions was far greater than in some other schools in which we have worked or that we attended as students ourselves. However, our only objective evidence for this so far is the finding that the frequency of stressor events in the project school was significantly and substantially above the frequency in the one middle school where we administered the (then) Academic Environment Inventory (AEI) outside the project school. What made this finding more portentous is that at the same time the project students appraised the stressor events as being just as upsetting as did the students in the comparison school. We are equally aware from our work in other schools that there are many schools where the frequency of stressor events appears to be just as high as in the project school, and that our findings in the project school have potential import for many schools, if not all.

Not only do our journals reflect the pervasiveness of stressor events and distress, the frequency of stressor events as measured by the AEI and (later) Things That Happen

In School (THIS) did not lessen from one year to another of the project's work in the school. Students tended to perceive stressor events happening less frequently after they had been in the school for a year, but this appeared to be more a maturation or adaptation effect than a change in the objective incidence of the events in the school. Likewise, the students' appraisal of the distressfulness of stressor events tended to stay the same from year to year, although there was an important exception to this. Boys' appraisal of stressor events dropped between the sixth and the seventh grade, perhaps in line with an expectation that boys would become tougher at that stage of their development.

Students' responses to THIS discriminated meaningfully between different types of stressor events, as shown particularly in the factor analysis of eighth grade students' responses. The analysis of the Stressor Appraisal responses produced five principal factors: Assaults on safety and integrity, Disruption of classwork, Physical assaults on self and possessions, Academic problems, and Instability of class. The Stressor Frequency responses also contained five factors: Academic problems, Being picked on, General school disruption, Insecurity in the school, and Abuse. The items themselves, of course, were written by project staff to reflect events that were observed in the first few months of the project's work in the school, but the events continued to be observed throughout the duration of the project, and the students' responses to THIS clustered them in consequential ways.

The relative frequency of different kinds of stressor events can be judged more validly from the students' THIS responses than from our observation notes, given our much more limited sampling of the settings of the school than the students' experience of them. The students rated the events constituting general school disruption and insecurity to be happening most often, and abuse and being picked on as happening least often, while they rated the occurrence of academic problems in between these extremes. The events happening most often were more general or systemic than personal and individual. On the other hand, the students said that they got most upset by events that we would characterize as more personal, viz., physical attacks and assaults on safety and integrity. Putting all of this together, one might perceive persistent conditions in the school that gnawed away at security and order, and intermittent personal attacks or insults that jerked more forcibly at the students' well being, as together making up the manifold of stressor events that the students experienced.

The stressor events originated and played themselves out at all levels of the school as a social system, with the stressors at one level tending to compound the stressors at another. This is particularly manifest in the ethnographic observations that have been included in the reports. Thus in one observation, a suicide that several children in a class had witnessed outside the school, the students' homeroom teacher's lateness to school, which in turn contributed to the students' being late for their first class, the schoolwide, indeed citywide production of report cards, a particular subject teacher's insensitive and confusing behavior, the class's history with this teacher, individual students' different actions resisting the teacher, and peer group agendas competing with the teacher, all flowed together to generate distress and failure for both the subject teacher and the students. Events in the outside lives of the children and of the teachers and administration alike impinged on life in the school. The style of the administration affected how the school absorbed external events, and in this school was characterized by arbitrariness, lack of communication, and distrust, at both the school and the district level. Teachers' styles varied greatly in terms of consideration, deliberate exercise of control, and complexity of activity, but in no case could be isolated from the overall disorganization of the school. Students' styles varied also along these same dimensions, and were complicated by peer relationships, especially pertaining to age and gender roles. The styles of teachers and students were variously sympathetic or incompatible with one another. This was itself an important source of stress, as well as moderating or intensifying the effect of more external events on classrooms and the individuals within them.

Neither observations nor THIS results showed that stressor events were generally more or less frequent at one phase of the academic year than another. There were certain specific times when the stress seemed to have mounted especially high, particularly when classes were reorganized on a schoolwide basis, and when the governance of the settings that brought together large numbers of students--the halls, auditoriums, and the cafeteria--deterioriated. More to our surprise, there seemed to be no correlation between the overall frequency of stressor events and the academic ranking of the classes, i. e., the homerooms travelling as a class. The higher tracked classes were just as liable to perceive high levels of stressor events as the lower tracked classes. This reflects the penetration of schoolwide stressors into virtually all classrooms as well as the variety of subject teachers that all classes had. There were some differences among classes, but they seemed to reflect the social and psychological composition of a class and its teachers rather than just its academic composition.

The frequency of support events that the students reported on the AEI and THIS, and the students' appraisal of how good support events made them feel, changed no more from year to year than the frequency and appraisal of stressor events. Again the one comparison with another school, where it was found both that the students experienced more support events and that they felt better about these events than in the project school, suggests the potential importance of these variables in the school environment. Very sobering, however, is the inference from the patterns of both the stressor events and the support events that the Project on Academic Striving had no general, schoolwide or cohort effect on the environment experienced by students. True, the project was frequently sought out by teachers and students alike to intervene in a crisis or just to give a shoulder to persons in distress; project staff organized many sessions with groups of students or staff that produced temporary solutions to various problems; the project was frequently commended for its work, indeed for its being the one program that had come into the school from the outside and stayed for several years and really helped. But it all seemed to be so many bandaids on a cancer. We have concluded that we would have to be more strongly linked to the power centers of the school, particularly the principal and the teachers' union, to have a more profound effect. Ironically, it was the principal who invited the project in, and the union chapter chairperson whose support gained the teachers' initial acceptance of the project. However, these individuals' own survival in the system turned out to be the matter of paramount concern to them, the more so as their own styles of leadership fostered further divisions in the school.

Having stated this as realistically as we can, it is still possible to point to methods that the project developed that would be important elements of a more general school improvement. These include the AEI or THIS itself, that is, an instrument to measure students', and in an adapted version, staff's perceptions of stressor events and support events, together with the use of results from the instrument in group or class meetings and other forums to identify problems and potential solutions. Another invention that frequently resulted in problem solving and positive feelings for its participants was the project's Human Rights Committee, our adaptation of the human subjects committee that was required by the foundation. This committee was composed of parents, teachers, and administrators, including the principal, and the project senior staff. It deliberated seriously on the merits of the various instruments and procedures that the project proposed to use, it received nonconfidential feedback from these sources, and through this it arrived at and contributed to a larger understanding of the dimensions of the students' and their own experience in the school. This committee made recommendations for interventions in the school, some of which were acted on, like the all-staff workshops on a Code of Conduct. Had the committee held a more official role in the school, it might have been more effective in bringing about enduring school change.

Findings from the project instruments: A scheme of relationships among personal and school factors influencing student outcomes.

One of the principal research objectives of the Project on Academic Striving was to develop a model of the relationships among variables relating to school stress. The model would clarify these relationships and lend itself to a more predictive method in future research and practice. We have presented such a profusion of results that it is incumbent on us to organize them conceptually. The scheme in Figure 6 is a first attempt to accomplish this. It presents an overview of the project's general findings with instruments.

The positive and negative factor scores from the Teacher Rating Scale have been combined to yield one score that correlates positively with teachers' grades. We considered representing Locus of Control as a measure of internality instead of "not-internal," reversing the signs of the

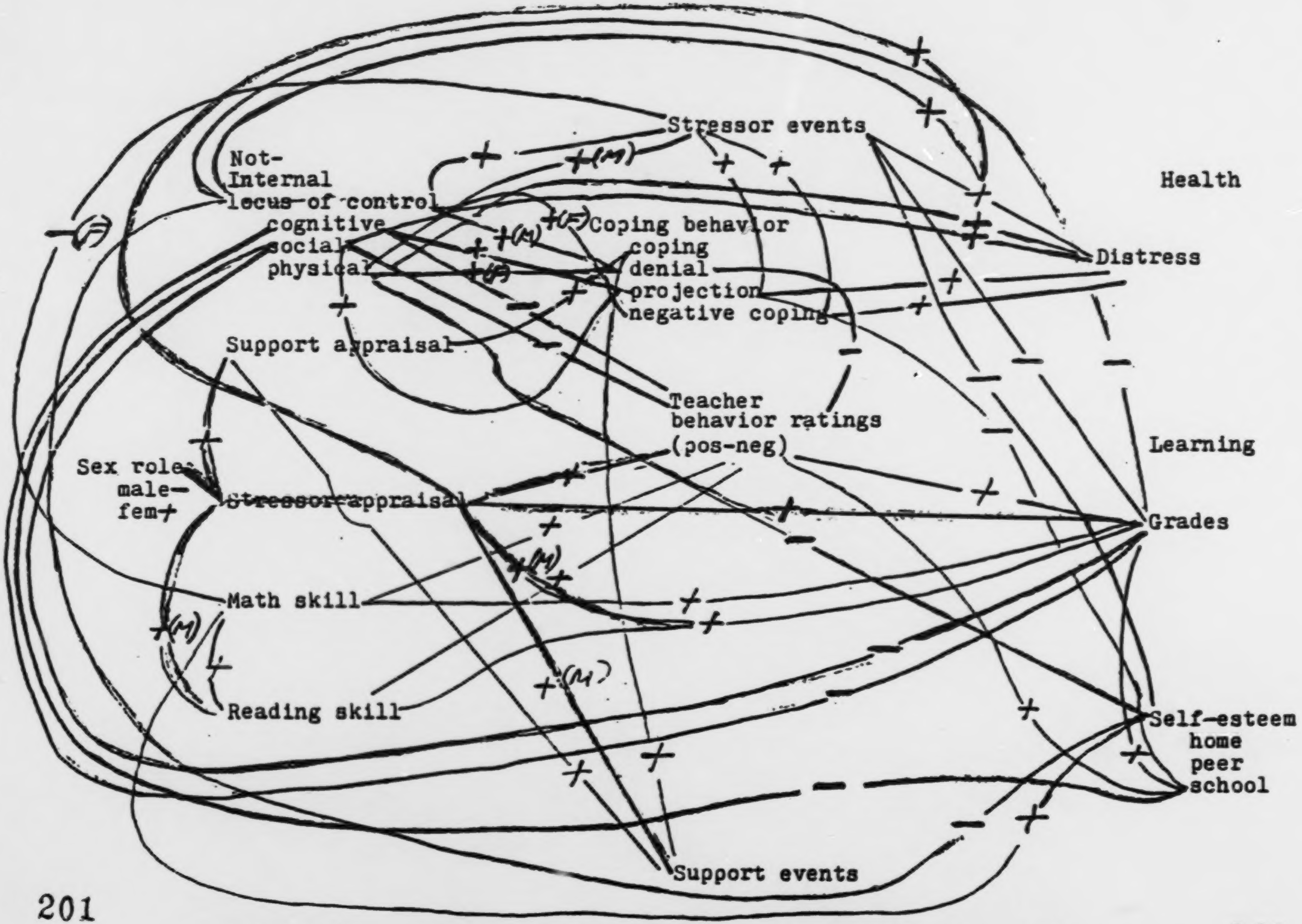
Stressor events
Not-
Internal
locus of control
cognitive
social
physical
Coping behavior
coping
denial
projection
negative coping
Support appraisal
Teacher
behavior ratings
(pos-neg)
Sex role:
male-
fem
Stressor appraisal
Math skill
Reading skill
Support events
Health
Distress
Learning
Grades
Self-esteem
home
peer
school
+(M)
+(F)

Figure 6 Scheme of relationships among personal and school factors influencing student outcomes

correlations reported in the analyses so that in the figures to follow a plus sign (+) could consistently stand for a relationship that is potentially positive with a positively valenced outcome. However, this would be invalid from the standpoint of one of the most important findings with the Connell Locus of Control Scale, that the "unknown" attribution, i.e. the respondent's not knowing where to attribute control, rather than internal or powerful others, tended to have the strongest correlations with achievement and with self-esteem. "Not-internal" is a more valid designation of powerful others or unknown than "internal" is of not powerful others or not unknown. This observation applies specifically to the subcategories of "Not-internal Control," cognitive, social and physical. Where we have connected the main heading, "Not-internal Control," to another variable, it usually represents a finding with the Nowicki-Strickland instrument, where not-internal does mean simply external.

The characteristics of students that we think of as more persistent are located on the left hand side of Figure 6, while student outcomes are located on the right. Outcomes at one point in time, however, can be causal factors at another point in time. Self-Esteem particularly might be represented among the entering characteristics of students, although the relationships we have found argue, we think, more for treating it as an outcome. Conversely, the more persistent characteristics might themselves have resulted from earlier processes, as we think Mathematics Skill might especially represent prior school learning.

The putatively more environmental variables of Stressor Events (or Stressor Frequency) and Support Events are shown in the middle of our scheme, along with the more immediately reactive variables of the students' Coping Behavior and the Teacher Ratings of students' behavior. Coping Behavior might be seen both in trait and state terms. Indeed, the substantial correlations we obtained between Stressor Frequency at different points in time, and between Support Frequency at different times, suggests that the tendency to perceive these events is also to some extent a characteristic of individual students and not just situational.

Figure 6 does not incorporate all of the project's findings by any means. The figure does not include various subscale findings, for example, the predictor dimensions for Stressor Appraisal and Stressor Frequency, or the success and failure subscales for Locus of Control. While it does include some one-time findings, for instance, those involving Distress, which was measured only once, it does not include findings at one point in time that were contradicted by findings at another point in time. Again, it does not record the relative strength or weakness of variables for different cohorts that we worked with. It incorporates some findings that applied only to males or females separately, but some of the more subtle differences that we found for gender are not represented.

We shall now summarize the more general findings in as few words as possible, beginning with the variables listed on the left hand side of Figure 6.

Not-internal Control had consistently negative consequences for positively valued outcomes, either in directly negative correlations or in its correlating positively with variables that themselves correlated negatively with valued outcomes. Thus Not-internal Control generally or in specific domains correlated negatively with Teacher Ratings, Grades, and Self-Esteem and positively with Stressor Events, Denial, Projection, Negative Coping, and Distress. Not-internal Control also amplified a correlation between Stressor Events and Distress.

Stressor Appraisal correlated positively with Teacher Ratings and Grades. However, it too amplified the positive relationship between Stressor Events and Distress. Stressor Appraisal was positively correlated with Support Appraisal. For boys, Stressor Appraisal was positively related to Support Events and to Reading Skill and it amplified the positive correlation between Reading Skill and Grades. Stressor Appraisal was weaker for boys than for girls while the correlation between Stressor Appraisal and Grades was stronger for boys than for girls.

In addition to correlating positively with Not-internal Control, Stressor Events correlated positively with Projection, Negative Coping, and Distress, and negatively with Grades and Self-Esteem.

Support Appraisal and Support Events were correlated with each other and were positively related to Coping. However, neither Support Appraisal nor Support Events related consistently to any of the achievement variables or to Self-Esteem or Distress.

In addition to correlating negatively with Not-internal Control, Teacher Ratings correlated negatively with Denial and positively with Math Skill and Reading Skill and with Grades and School Self-Esteem. Of course, Math and Reading Skill correlated positively with Grades, but only Math Skill was positively related to Self-Esteem. For girls, Math Skill correlated negatively with Stressor Events.

While Distress was related positively to Not-internal Control, Stressor Events, Projection, and Negative Coping, it was correlated neither with Grades nor with Self-Esteem. Distress thus has emerged as an outcome independent of Grades and Self-Esteem as outcomes. A factor analysis of Distress, not reflected in Figure 6, found three principal factors: Depression Symptoms, Psychosomatic Symptoms, and Illness Symptoms. Stressor Frequency correlated most strongly with the Depression Symptoms subscale of the Distress instrument and least strongly with the Illness Symptoms subscale.

What is striking at this gross level of generality is the consistency of all of these findings with what one would expect from the nature of the constructs and previous research. This general pattern suggests the validity of the findings with the constructs that have not previously been explored in school research, those associated with Stressor Appraisal and Stressor Events. A strong caveat to this is that we failed to find certain relationships that we did expect, particularly between Support Events and Distress, Grades, and Self-Esteem. Indeed, some of the findings suggest that social support was positively related to distress and negatively related to grades, seemingly in some groups where peers may have been both generating stressor events and supporting one another in ways that worked against school achievement.

Why we find the regularity of the findings striking is that they were obtained in a school environment that from a different perspective appeared to be chaotic. Much that was happening in this environment turns out to yield to understanding, even though it did not yield to the project's efforts to change the environment systematically.

In order to highlight certain patterns in our scheme of relationships, we have colored in red the vectors representing relationships between Stressor Appraisal and other variables, and in blue the vectors standing for relationships between a Not-internal Control variable and other variables. The highlighting reveals that these systems were quite distinct from one another. Both connected directly to Teacher Behavior Ratings and Grades, but they seem to have functioned differently for students who were relatively internal or external. Relative internality had a greater correlation with grades for students in the more internal range of locus of control scores, and relative Stressor Appraisal a greater correlation with grades for students in the more external range of locus of control scores. Stressor Appraisal, not Not-internal Control, was correlated with Math and Reading Skill. Not-internal Control was connected with Self-Esteem, but Stressor Appraisal was not. Only Not-internal Control was correlated with Coping Behavior, the frequency of Stressor Events or the level of Distress. Both Stressor Appraisal and Not-internal Control, however, amplified the strength of the correlation between Stressor Events and Distress. Finally, the level of Stressor Appraisal, but not of Not-internal Control, was linked to students' gender, apparently through the sex roles for males and females.

The different patterns that emerged for boys and girls are important. First, boys' grades were substantially lower than girls', despite the fact that their reading and math test scores were not significantly different. Then we find that the boys appraised stressor events as less upsetting than did the girls, and that the boys' appraisal dropped between sixth and seventh grade, when the girls' appraisal held steady. This suggests that the boys were less cognizant of the impact stressor events could have on their well being, or that they denied or devalued this impact. The boys who achieved higher grades did appraise stressor events more strongly. For these higher achieving boys there was also a strong correlation between the frequency of stressor events and self-reported distress, a correlation that obtained more generally for the girls. In short, boys with higher grades had certain affective orientations in common with the girls, compared to boys with lower grades. The difficulty of accomplishing this is indicated by yet another finding, that while female teachers tended to rate girls more favorably than the male teachers rated them on both Positive Behavior and Negative Behavior, the male teachers only rated boys more favorably than the female teachers rated them on Positive Behavior. Boys' negative behavior had no champion. This then made it all the harder for a boy to satisfy simultaneously the teachers' ideal of a good student and a peer ideal for masculine behavior. The finding that locus of control in the social domain, not just in the cognitive domain, correlated with achievement, underscores this attitudinal dimension of achievement. The coping studies showed that in general social situations lent themselves less to euphimistic or socially desirable responses than academic situations, and that for boys there was a correlation between positive solutions to social problems and academic achievement. There may have been a price that boys paid paid for achievement, however. The boys with high reading scores had lower self-esteem than the boys with lower reading scores and than the girls with either high or low reading scores.

Our case studies of individual students have revealed a far-reaching consistency between the behavior of a given student and the student's scores on the various measures represented in our general scheme. Yet each student emerged as a unique person, not least in her/his way of responding to stressor events. Gerise reacted very strongly to events, but she was cautious about actually getting involved in them. Though her locus of control was external, her strong Stressor Appraisal and her mathematics skill, together with the pro-school attitudes and behaviors that seemed to be associated with doing well on mathematics tests, protected her in dangerous situations in school and compensated for her low reading skill. David, one of the youngest and smallest boys in his class, banded with other small boys.

He tried to avoid the more frightening stressors, but in the process he avoided some potentially positive challenges as well. Charles was filled with good intentions, but he tended actually to do what powerful others, adult or peer, demanded that he do or were doing themselves. At first, this resulted in Charles's conforming to school expectations, but at the same time he also perceived a very high level of stressor events. As he grew older and larger, Charles gradually withdrew from the classroom and then, in high school, from school altogether. Austin cooperated with his teachers, but he also defended himself from other boys successfully and had good friends among his peers. In accomplishing what was associated with both male and female roles, Austin exemplified a kind of androgyny that seemed to be important especially for the male students' success in the school. Finally, Keith had very strong motivation to succeed in school, but he did not play the school game well, mixing approved and unacceptable feelings and behaviors in ways that often made the school tasks pale in comparison to life's social and biological agenda. Tragically, all of these students could have learned more at this stage of their academic and social development, and indeed had much to give, but the school was a very destructive environment in which to try to teach or learn. Two years after they left the eighth grade, only two of these five students are likely to obtain a high school diploma.

Implications for further research and intervention

The patterns we have found argue that efforts to moderate the impact of Stressor Events on student outcomes, ultimately their health, learning, and self-esteem, should take into account both Stressor Appraisal and Locus of Control. We can see in retrospect that the project's activities with students were not deliberate or intensive enough to affect these two variables, particularly the students' sense of control, substantially. This is not just a matter of hindsight, however. Project staff became increasingly aware during the course of the research that the question of control over stressor events needed to be addressed, but that it could not be pursued validly with the students so long as even the adults in the environment felt that things that happened in school were beyond their control.

A major limitation of our research is that we did not attempt to measure sources of stress in the school other than through the perceptions of the students themselves. Thus the factors that we observed bearing on the incidence of stressor events, i. e. that are identified in our analysis of ethnographic observations, are not specified in the summary scheme of relationships. For this measurement to be meaningful it ought to be carried out in more than one school. We could then ascertain more systematically how variations in the objective qualities of the school environment are associated with different levels of the stressors experienced by students, and indeed with different types of stressor events. We would expect such a study to throw light also on the properties of school environments that are asssociated with different levels and types of support, which so far has yielded less to our observation.

Until we measure the school environment as systematically as we have measured students, we run the risk of attributing the level of stressor events exclusively to characteristics of the students, i. e., the risk of blaming the victim. In our follow-up study with students who entered high school in Fall 1986, we are aware that in the eyes of the students the schools vary considerably in their level of support. This research, however, needs to begin earlier in the students' development, as the Project on Academic Striving did. We have also concluded that we need to examine the contributions of the students' home environments to stress or the moderation of stress in school. We avoided this in the Project on Academic Striving because of what we perceived as an overemphasis on home factors by school personnel when we first began the project. However, we did come to appreciate anew the importance of the home environment as we got to know individual students' families and home circumstances. A few items on support at home that we included in Things That Happen In School produced very provocative findings that underscore a question we have raised more generally, how does support function in relation to both school stress and school goals, especially, when and how is the alleviation of school stress congruent or not with the accomplishment of the goals of school? We think it would be imperative for research that attempted to build upon ours to enlist families in the study of their students' coping with school stress, including in this the contribution of home events and conditions to the students' stress and coping. We are well aware that research has been proceeding concurrently with our own that would enhance our capability for pursuing these questions further.

This has been first of all a study of children in school. Virtually all of the children in the study, however, were black. Indeed, half of their teachers, some of whom worked very closely with us in this project, were also black, as again were half of the members of our research staff during our four years in the middle school. We are very hopeful that our findings will contribute to an improvement of the schools in which black children study, specifically of the response of the schools to the children and of their response to the schools. Some of our findings, for example of the importance of the dimension of unknown in the students' attribution of control, seem to be particularly germane to the black community. What we think is at least equally significant, however, is the resemblance of how the students responded to our instruments and our actions to how we think children generally would respond, or children we have known in other contexts. This was not a comparative study, and the findings such a study might yield are not exactly what we are trying to imply here. Rather, it is the purposefulness and life trajectory, the discrimination and delicacy, the individual shades of feeling, basically the humanity of the children that comes through most strongly in the record of our experience with them. It is this humanity that the schools must prize and that research on black and all children must continue to illuminate.

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PROJECT ON ACADEMIC STRIVING

The Moderation of Stress in the Lives of the Students of an Urban Intermediate School: A Project to Coordinate Research and Environmental Intervention

FINAL REPORT TO THE WILLIAM T. GRANT FOUNDATION

__Volume Two__

TABLES AND APPENDIXES

LIST OF TABLES

TABLE

1. Results of Original Factor Analysis of THIS

2. Results of Condensed Factor Analysis of THIS

3. Things that Happen In School (THIS) Condensed Factor Dimensions

4. Stressor Appraisal and Stressor Frequency Means and Standard Deviations for Cohort Students in Sixth, Seventh, and Eighth Grades

5. Stressor Appraisal and Stressor Frequency Correlations for Cohort Students in Sixth, Seventh, and Eighth Grades

5A. Stressor Appraisal and Stressor Frequency Correlations for Male Cohort Students in Sixth, Seventh, and Eighth Grades

5B. Stressor Appraisal and Stressor Frequency Correlations for Female Cohort Students in Sixth, Seventh, and Eighth Grades

6. Support Appraisal and Support Frequency Means and Standard Deviations for Cohort Students in Sixth, Seventh, and Eighth Grades

6A. Stressor and Support Appraisal and Frequency Means and Standard Deviations for Non-Project Students in Eighth Grade

7. Support Appraisal and Support Frequency Correlations for Cohort Students in Sixth, Seventh, and Eighth Grades

7A. Support Appraisal and Support Frequency Correlations for Male Cohort Students in Sixth, Seventh, and Eighth Grades

7B. Support Appraisal and Support Frequency Correlations for Female Cohort Students in Sixth, Seventh, & Eighth Grades

8. Distress Scale Factors

9. Means, Standard Deviations, and Intercorrelations of Distress and the Distress Factors: Depression Symptoms, Psychosomatic Symptoms, and Illness Symptoms

10. Intercorrelations of THIS Subscales and Distress for All Eighth Grade Groups

TABLE

11. Means and Standard Deviations of THIS Subscales and Distress For All Boys and Girls With High, Medium, and Low Stressor Appraisal Scores

12. Intercorrelations, of THIS Subscales and Distress for Boys and Girls with High, Medium, and Low Stressor Appraisal Scores

13. Intercorrelations of Stressor Dimension Scales and Distress Factors

14. Selected Intercorrelations of Support Dimension Scales, Distress Factors, and Stressor Frequency Dimensions

15. Means, Standard Deviations, and t-Values for Comparison of Scores for Cohort Boys and Girls on Selected Variables

16. Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for ALL Cohort Students

17. Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strictland Locus of Control, Stressor appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Boys

18. Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Girls

19. Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for All Cohort Students

20. Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Boys

21. Interrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Girls

TABLE

22. Means and Standard Deviations of Stressor Appraisal, Stressor Frequency, Locus of Control, and Distress for Students Above and Below the Locus of Control Median Scores

23. Correlations of Stressor Appraisal, Stressor Frequency, Locus of Control, and Distress for Students Above and Below the Locus of Control Median Scores

24. Results of Regression of Distress on Nowicki-Strickland Externality, Stressor Frequency, and Externality-Stressor Frequency, and Externality-Stressor Frequency Interaction

25. Stressor Frequency and Distress Means and Standard Deviations for Students Above and Below Median GPA

26. Intercorrelations of Stressor Frequency, Distress, and Midyear Grade Point Average for Students Whose GPA2P is Below Median

27. Intercorrelations of Stressor Frequency, Distress, and Midyear Grade Point Average for Students Whose GPA2P is Above Median

28. Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores - All Cohort Students

29. Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores - Boys

30. Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores - Girls

31. Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores - All Cohort Students

32. Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores - Boys

33. Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores - Girls

TABLE

34. Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores - All Cohort Students

35. Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores - Boys

36. Correlations of Connell Locus Control for Success and Failure Domain Scores with THIS Support Availability Item Scores - Girls

37. Means and Standard Deviations of Grade Point Averages for Eighth Grade Marking Periods, and of Reading and Mathematics Test Scores, for Cohort Students

38. Percentage of Students Receiving Zero to Four Passing Grades in Four Major Subjects at Eighth Grade Midyear and Final

39. Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for All Cohort Students

40. Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for Cohort Boys

41. Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for Cohort Girls

42. Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, All Cohort Students

43. Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, Cohort Boys

44. Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, Cohort Girls

45. Result of Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading

46. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, All Cohort Students

TABLE

47. Means Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, Cohort Boys

48. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, Cohort Girls

49. Results of Regression of Grade Point Average on THIS Predictor Subscales and Reading

50. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, All Cohort Students

51. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, Cohort Boys

52. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, Cohort Girls

53. Results of Regression of Grade Point Average on THIS Predictor Subscales and Mathematics

54. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, All

55. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, Boys

56. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, Girls

57. Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control

58. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with Low Externality

TABLE

59. Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with High Externality

60. Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with Low Externality

61. Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with High Externality

62. Correlations among Regression Analysis Variables for Students with Low Externality Separately for Boys and Girls

63. Correlations Among Regression Analysis Variables for Students with High Externality Separately for Boys and Girls

64. Items Associated with Teacher Rating Scale Factors

65. Means and Standard Deviations of Teacher Rating Scales Scores for Positive Behavior and Negative Behavior, and of Other Scores, for Cohort Students in the TRS Sample

66. Correlations of Grade Point Average, Reading and Math Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior, All Cohort Students for Whom TRS Scores Available

67. Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior, Boys

68. Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior, Girls

69. Correlations of Connell Locus of Control for Failure Domain Scores, Hare Self-Esteem Domain Scores, and Stressor and Support Appraisal Scores with TRS Positive and Negative Behavior Scores, All Cohort Students for Whom TRS Scores Available

70. t-Tests of Differences between Male and Female Teachers' Behavior Ratings for Total Sample of Project Students Rated in 1984-85 (Pairs analysis: Cases with ratings by both male and female teachers)

TABLE

71. t-Tests of Differences between Male and Female Teachers' Behavior Ratings of Boys and Girls in Total Sample of Project Students in 1984-85

72. Correlations between Academic Coping Inventory Subscales and the Stressor Variables for the Whole Sample and for Boys and Girls Separately

73. Significant Correlations among Academic Coping Inventory Subscales and Hare Self-Esteem Scale Subscales and Nowicki-Strickland Externality of Control Scale for the Whole Sample and for Boys and Girls Separately

74. Means and Standard Deviations of Variables for Four Groups Defined by Gender and Reading Scores Above 6.7 and Equal to and Below 6.7

75. Correlations among Academic Coping Inventory Subscales, Retrospective Self-statements and Checklist Endorsement Statements for Whole sample and for Boys and Girls

76. List of Upsetting Situations From Interviews of Students in Spring, 1985

77. Percentages of Students Making Positive Coping Self-Statements in the Stressful Academic and Social Situations by Status Group

78. Means and Standard Deviations and Significant t values for Comparison of the Four Status Groups defined by High and Low Stressor Frequency and Mid-year Grade Point Average

79. Percentages of Students making Positive Appraisals in Stressful Academic and Social Situations by Status Group

80. Correlations between Students' Responses to the Academic Coping Inventory in 1985 and 1986

81. Means and Standard Deviations and Significant t Values for Comparison of Boys and Girls

82. Means and Standard Deviations and Significant t Values ($p<.05$) for Comparison of the Four Status Groups defined by High and Low Stressor Frequency and Mid-year Grade Point Average

83-90. [These Table Numbers not used]

TABLE

91. Correlations Between Three Perceived Dimensions of Control and Four Achievement Variables

92. Correlations Between Perceived Dimensions with Successful Outcomes of Control and Achievement Variables

93. Correlations Between Perceived Dimensions with Failure Outcomes of Control and Achievement Variables

94. Correlations Between Perceived Dimensions of Control Within the Social Domain in Relation to Achievement Variables

95. Correlations Between Perceived Dimensions of Control within the Cognitive Domain in Relation to Achievement Variables

96. Correlations Between Perceived Dimensions of Control Within the Physical Domain in Relation to Achievement Variables

97. Correlations Between Perceived Dimensions of Control within the General Domain in Relation to Achievement Variables

98. Correlations Between Connell's Relative Internality for Success and Failure with Achievement Variables

99. Correlations Between Bethea's Relative internality for Success within four Domains and Achievement

100. Correlations Between Dimensions and Successful Outcomes of Control within the Social Domain in Relation to Achievement

101. Correlations Between Dimensions and Failure Outcomes of Control within the Social Domain in Relation to Achievement

102. Correlations Between Dimensions and Successful Outcomes of Control within the Cognitive Domain in Relation to Achievement

103. Correlations Between Dimensions and Failure Outcomes of Control within the Cognitive Domain in Relation to Achievement

104. Correlations Between Defensive Externality and Congruency in Relation to Achievement

105. Correlations Between Defensive Externality within Four Domains and Achievement

TABLE

106. Correlations Between Congruency within Four Domains and Achievement

107. Correlations Between Three Perceived Dimensions of Control and Self-Esteem Variables

108. Correlations Between Defensive Externality and Congruency with Self-Esteem Variables

109. Correlations Between Achievement and Self-Esteem Variables

APPENDIXES

A. Materials for School-wide and Classroom Interventions, 1984-1985 School Year

B. Minutes of the Human Rights Committee Meetings, 1984-1985 and 1985-1986 School Years

C. Instruments and Research Protocols Used in 1984-1985 and 1985-1986 School Years

D. Cooperative Learning Workshop Materials

E. Materials for School-wide and Classroom Interventions, 1985-1986 School Years

F. *Student's Coping with Academic and Social Stress in an Inner-city Middle School*. Paper presented in April, 1987 at the Annual Meeting of the American Educational Research Association, Washington, D.C.

Table 1

Results of Original Factor Analysis of THIS

STRESSOR APPRAISAL	Percent variance
1. *Assaults on safety and integrity*.	68.8%
I felt unsafe in the school.	
Someone tried to pressure me to cut class.	
(People in the hall were bothering the classroom.)	
Someone made fun of something I said in class.	
Somebody treated me like I always do wrong.	
Someone was picking on me in the hall.	
(People were throwing things and fighting in the lunchroom.)	
2. *Disruption of classwork*.	10.1%
People in the classroom wouldn't get quiet.	
Someone tried to copy my work when I didn't want them to.	
People in the hall were bothering the classroom.	
(I did worse on a test than I should have.)	
I could not finish my work in class.	
3. *Physical assaults on self and possessions*	7.9%
Someone took something from me.	
Someone shouted or screamed at me.	
I didn't have a pen or paper or my book to do my work in class.	
(Someone was picking on me in the hall.)	

4. Academic problems. 6.9%

I couldn't get an answer to a question I asked.

I did worse on a test than I should have.

I was warned that I might not pass a subject or pass to the next grade.

(Someone made fun of something I said in class.)

5. Instability of class. 6.4%

I or one of my friends was moved to a different class.

There was a change of teachers in one (or more) of my classes.

STRESSOR FREQUENCY

1. Academic upset. 44.8%

I could not finish my work in class.

I was warned that I might not pass a subject or pass to the next grade.

I didn't have a pen or paper or my book to do my work in class.

I did worse on a test than I should have.

2. Being picked on. 16.1%

Someone was picking on me in the hall.

Someone took something from me.

Someone hit me, or kicked or pushed me.

Somebody treated me like I always do wrong.

3. General school disruption. 13.9%

People were throwing things and fighting in the lunchroom.

People in the hall were bothering the classroom.

4. Insecurity in the school. 9.1%

I or one of my friends was moved to a different class.

I felt unsafe in the school.

5. Abuse. 5.9%

Someone shouted or screamed at me.

(Someone tried to pressure me to cut class.)

SUPPORT APPRAISAL

1. People giving support. 69.9%

There was a student at school who I could really count on for help when I needed it.

Somebody helped me make up with a friend.

There was an adult at school who I could talk to about almost anything that was bothering me in school.

There was an adult at home who I could talk to about almost anything that was bothering me in school.

Someone said something to cheer me up.

People acted in a way that let me know they understood me.

Someone helped me understand something.

I did well on a test or a homework assignment.

I got to be in a class or group with other students I like.

People in the classroom spoke respectfully to each other.

(Somebody helped me do my homework.)

(There was a sister or brother or friend at home who I could count on for help when I needed it.)

2. Acts of friendship. 9.7%

Somebody asked me to be his or her friend.

(Somebody helped me make up with a friend.)

Someone gave me a hug or a pat on the back.

(People paid attention to something I said in class.)

(I helped a friend who had a problem.)

3. Help. 8.0%

Somebody stuck up for me when I was getting picked on.

There was a sister or brother or friend at home who I could count on for help when I needed it.

(Someone helped me understand something.)

Somebody helped me do my homework.

(I got to be in a class or group with other students I like.)

4. Encouragement. 6.9%

Somebody helped me do something I needed to do.

Somebody said I did something right.

People paid attention to something I said in class.

SUPPORT FREQUENCY

1. Encouragement. 63.1%

Someone gave me a hug or a pat on the back.

I did well on a test or a homework assignment.

People paid attention to something I said in class.

I helped a friend who had a problem.

(Somebody said something to cheer me up.)

(Someone said I did something right.)

People acted in a way that let me know they understood me.

2. Help. 13.7%

Somebody helped me do something I needed to do.

Somebody helped me do my homework.

Somebody stuck up for me when I was getting picked on.

Somebody helped me make up with a friend.

3. Friendship. 10.0%

Somebody helped me think about a personal problem.

Somebody asked me to be his or her friend.

(Somebody helped me make up with a friend.)

4. Verbal support. 7.3%

Somebody said something to cheer me up.

Somebody helped me understand something.

There was an adult at school who I could talk to about almost anything that was bothering me at school.

Someone said I did something right.

5. Person support. 5.9%

There was a sister or brother or friend at home who I could count on for help when I needed it.

There was an adult at home who I could talk to about almost anything that was bothering me in school.

There was a student at school who I could really count on for help when I needed it.

Table 2

Results of Condensed Factor Analysis of THIS

STRESSOR FREQUENCY	Percent variance
1. Academic trouble.	61.3%
I was warned that I might not pass a subject or pass to the next grade.	
I could not finish my work in class.	
I did worse on a test than I should have.	
I didn't have a pen or paper or my book to do my work in class.	
Someone tried to pressure me to cut class.	
I or one of my friends was moved to a different class.	
2. Physical and material assaults.	21.1%
Someone hit me, or kicked or pushed me.	
Someone took something from me.	
Someone was picking on me in the hall.	
Someone treated me like I always do wrong.	
Someone shouted or screamed at me.	
3. General school disruption.	17.6%
People in the hall were bothering the classroom.	
People were fighting and throwing things in the lunchroom.	
I felt unsafe in the school.	
People in the classroom wouldn't get quiet.	

Table 3

Things That Happen In School (THIS) Condensed Factor Dimensions

		n=159 All Subjects		n=90 Project Subjects	
		Mean	Std dev	Mean	Std dev
STRA8D1	Assaults Safety & Integrity Ap	3.7180	0.5244	3.6907	0.4906
STRA8D2	Academic Trouble Ap	3.7665	0.4817	3.7681	0.4779
STRA8D3	Physical Attacks Ap	3.9790	0.5757	3.9630	0.5772
STRAP8T	Stressor Appraisal Total	3.7506	0.4086	3.7444	0.3901
STRF8D1	Academic Trouble Fr	1.5451	0.4025	1.5537	0.4333
STRF8D2	Physical Assaults Fr	1.3874	0.4172	1.3778	0.3937
STRF8D3	General School Disruption Fr	2.0016	0.4736	1.9917	0.4992
STRFR8T	Stressor Frequency Total	1.6704	0.2986	1.6583	0.3118
SUPA8D1	People Support Ap	4.1012	0.5296	4.1306	0.4516
SUPA8D2	Friendship and Help Ap	4.0629	0.4923	4.0711	0.4503
SUPA8D3	Encouragement Ap	4.1195	0.5503	4.1333	0.4967
SUPAP8T	Support Appraisal Total	4.0972	0.4666	4.1217	0.4103
SUPF8D1	Encouragement Fr	2.0440	0.4560	2.0593	0.4670
SUPF8D2	Help and Friendship Fr	1.7421	0.4073	1.7519	0.3952
SUPF8D3	Verbal Support Fr	1.9937	0.4920	2.0222	0.4735
SUPF8D4	Person Support Fr	2.0482	0.5446	2.0296	0.5280
SUPFR8T	Support Frequency Total	1.9415	0.3491	1.9467	0.3474

Table 4

Stressor Appraisal and Stressor Frequency Means and Standard Deviations for Cohort Students in Sixth, Seventh, and Eighth Grades

All

Variable	Cases	Mean	Std dev
STRAP6	53	3.9198	0.4360
STRAP7	72	3.6615	0.4677
STRAP8	90	3.6653	0.3994
STRFR6	53	1.8550	0.3488
STRFR7	72	1.6406	0.3432
STRFR8	90	1.6521	0.3173

Males

Variable	Cases	Mean	Std dev
STRAP6	33	3.8447	0.4561
STRAP7	41	3.4665	0.4072
STRAP8	53	3.5377	0.3664
STRFR6	33	1.8409	0.3487
STRFR7	41	1.6143	0.3196
STRFR8	53	1.6781	0.3159

Females

Variable	Cases	Mean	Std dev
STRAP6	20	4.0438	0.3794
STRAP7	31	3.9194	0.4193
STRAP8	37	3.8480	0.3772
STRFR6	20	1.8781	0.3567
STRFR7	31	1.6754	0.3748
STRFR8	37	1.6149	0.3199

Table 5

Stressor Appraisal and Stressor Frequency Correlations for Cohort Students in Sixth, Seventh, and Eighth Grades

All

	STRAP6	STRAP7	STRAP8	STRFR6	STRFR7	STRFR8
STRAP6	1.0000 (53) P=*****	0.2611 (49) P= .035	0.1963 (53) P= .079	0.1433 (53) P= .153	0.0868 (50) P= .274	0.1642 (53) P= .120
STRAP7	0.2611 (49) P= .035	1.0000 (72) P=*****	0.5617 (72) P=0.000	-0.0392 (49) P= .394	-0.1082 (71) P= .185	-0.1209 (72) P= .156
STRAP8	0.1963 (53) P= .079	0.5617 (72) P=0.000	1.0000 (90) P=*****	0.0870 (53) P= .268	-0.1269 (72) P= .144	-0.1812 (90) P= .044
STRFR6	0.1433 (53) P= .153	-0.0392 (49) P= .394	0.0870 (53) P= .268	1.0000 (53) P=*****	0.6123 (50) P=0.000	0.5414 (53) P=0.000
STRFR7	0.0868 (50) P= .274	-0.1082 (71) P= .185	-0.1269 (72) P= .144	0.6123 (50) P=0.000	1.0000 (72) P=*****	0.6094 (72) P=0.000
STRFR8	0.1642 (53) P= .120	-0.1209 (72) P= .156	-0.1812 (90) P= .044	0.5414 (53) P=0.000	0.6094 (72) P=0.000	1.0000 (90) P=*****

Table 5A

Stressor Appraisal and Stressor Frequency Correlations for Male Cohort Students in Sixth, Seventh, and Eighth Grades

	STRAP6	STRAP7	STRAP8	STRFR6	STRFR7	STRFR8
STRAP6	1.0000 (33) P=*****	0.0670 (30) P= .362	-0.1529 (33) P= .198	0.3164 (33) P= .036	0.1590 (31) P= .196	0.3136 (33) P= .038
STRAP7	0.0670 (30) P= .362	1.0000 (41) P=*****	0.4168 (41) P= .003	-0.1724 (30) P= .181	-0.2852 (40) P= .037	-0.1165 (41) P= .234
STRAP8	-0.1529 (33) P= .198	0.4168 (41) P= .003	1.0000 (53) P=*****	-0.0965 (33) P= .297	-0.2160 (41) P= .087	-0.1422 (53) P= .155
STRFR6	0.3164 (33) P= .036	-0.1724 (30) P= .181	-0.0965 (33) P= .297	1.0000 (33) P=*****	0.5833 (31) P=0.000	0.6619 (33) P=0.000
STRFR7	0.1590 (31) P= .196	-0.2852 (40) P= .037	-0.2160 (41) P= .087	0.5833 (31) P=0.000	1.0000 (41) P=*****	0.5724 (41) P=0.000
STRFR8	0.3136 (33) P= .038	-0.1165 (41) P= .234	-0.1422 (53) P= .155	0.6619 (33) P=0.000	0.5724 (41) P=0.000	1.0000 (53) P=*****

Table 5B

Stressor Appraisal and Stressor Frequency Correlations for Female Cohort Students in Sixth, Seventh, and Eighth Grades

	STRAP6	STRAP7	STRAP8	STRFR6	STRFR7	STRFR8
STRAP6	1.0000 (20) P=*****	0.3863 (19) P= .051	0.5074 (20) P= .011	-0.2213 (20) P= .174	-0.0436 (19) P= .430	0.0188 (20) P= .469
STRAP7	0.3863 (19) P= .051	1.0000 (31) P=*****	0.5236 (31) P= .001	0.0035 (19) P= .494	-0.0570 (31) P= .380	-0.0470 (31) P= .401
STRAP8	0.5074 (20) P= .011	0.5236 (31) P= .001	1.0000 (37) P=*****	0.2901 (20) P= .107	-0.1243 (31) P= .253	-0.1750 (37) P= .150
STRFR6	-0.2213 (20) P= .174	0.0035 (19) P= .494	0.2901 (20) P= .107	1.0000 (20) P=*****	0.6491 (19) P= .001	0.3949 (20) P= .042
STRFR7	-0.0436 (19) P= .430	-0.0570 (31) P= .380	-0.1243 (31) P= .253	0.6491 (19) P= .001	1.0000 (31) P=*****	0.6725 (31) P=0.000
STRFR8	0.0188 (20) P= .469	-0.0470 (31) P= .401	-0.1750 (37) P= .150	0.3949 (20) P= .042	0.6725 (31) P=0.000	1.0000 (37) P=*****

Table 6

Support Appraisal and Support Frequency Means and Standard Deviations for Cohort Students in Sixth, Seventh, and Eighth Grades

All

Variable	Cases	Mean	Std dev
SUPAP6	53	4.2566	0.3720
SUPAP7	75	4.0196	0.5010
SUPAP8	90	4.0770	0.4194
SUPFR6	53	2.0164	0.2786
SUPFR7	75	1.9236	0.2914
SUPFR8	90	1.9022	0.3638

Males

Variable	Cases	Mean	Std dev
SUPAP6	32	4.2208	0.4184
SUPAP7	43	3.9163	0.4491
SUPAP8	54	3.9889	0.4080
SUPFR6	32	1.9917	0.2771
SUPFR7	44	1.8424	0.2721
SUPFR8	54	1.8321	0.3591

Females

Variable	Cases	Mean	Std dev
SUPAP6	20	4.3033	0.2938
SUPAP7	30	4.1600	0.5236
SUPAP8	36	4.2093	0.4063
SUPFR6	20	2.0333	0.2740
SUPFR7	29	2.0322	0.2909
SUPFR8	36	2.0074	0.3498

Table 6a

Stressor and Support Appraisal and Frequency Means and Standard Deviations for Non-Project Students in Eighth Grade

All

Variable	Cases	Mean	Std dev
STRAP8	69	3.6739	0.4264
STRFR8	69	1.6929	0.3058
SUPAP8	69	4.0319	0.5253
SUPFR8	69	1.8850	0.3529

Boys

Variable	Cases	Mean	Std dev
STRAP8	37	3.6030	0.3828
STRFR8	37	1.7078	0.3251
SUPAP8	37	4.0180	0.4799
SUPFR8	37	1.9027	0.3670

Girls

Variable	Cases	Mean	Std dev
STRAP8	32	3.7559	0.4646
STRFR8	32	1.6758	0.2859
SUPAP8	32	4.0479	0.5808
SUPFR8	32	1.8646	0.3406

Table 7

Support Appraisal and Support Frequency Correlations for Cohort Students in Sixth, Seventh, and Eighth Grades

All

	SUPAP6	SUPAP7	SUPAP8	SUPFR6	SUPFR7	SUPFR8
SUPAP6	1.0000 (53) P=*****	0.2541 (50) P= .037	0.3564 (52) P= .005	0.0843 (52) P= .276	-0.1231 (50) P= .197	0.0732 (52) P= .303
SUPAP7	0.2541 (50) P= .037	1.0000 (75) P=*****	0.5205 (73) P=0.000	0.3696 (50) P= .004	0.2394 (74) P= .020	0.2206 (73) P= .030
SUPAP8	0.3564 (52) P= .005	0.5205 (73) P=0.000	1.0000 (90) P=*****	0.1412 (52) P= .159	-0.0032 (73) P= .489	0.2957 (90) P= .002
SUPFR6	0.0843 (52) P= .276	0.3696 (50) P= .004	0.1412 (52) P= .159	1.0000 (53) P=*****	0.2446 (50) P= .043	0.3468 (52) P= .006
SUPFR7	-0.1231 (50) P= .197	0.2394 (74) P= .020	-0.0032 (73) P= .489	0.2446 (50) P= .043	1.0000 (75) P=*****	0.4464 (73) P=0.000
SUPFR8	0.0732 (52) P= .303	0.2206 (73) P= .030	0.2957 (90) P= .002	0.3468 (52) P= .006	0.4464 (73) P=0.000	1.0000 (90) P=*****

Table 7a
Support Appraisal and Support Frequency Correlations for Male Cohort Students in Sixth, Seventh, and Eighth Grades

	SUPAP6	SUPAP7	SUPAP8	SUPFR6	SUPFR7	SUPFR8
SUPAP6	1.0000 (32) P=*****	0.3314 (30) P= .037	0.4656 (32) P= .004	-0.0259 (31) P= .445	-0.1166 (30) P= .270	0.1488 (32) P= .208
SUPAP7	0.3314 (30) P= .037	1.0000 (43) P=*****	0.3576 (43) P= .009	0.4901 (30) P= .003	0.2089 (43) P= .089	0.1696 (43) P= .138
SUPAP8	0.4656 (32) P= .004	0.3576 (43) P= .009	1.0000 (54) P=*****	0.2419 (32) P= .091	-0.0699 (44) P= .326	0.3430 (54) P= .006
SUPFR6	-0.0259 (31) P= .445	0.4901 (30) P= .003	0.2419 (32) P= .091	1.0000 (32) P=*****	0.3078 (30) P= .049	0.4809 (32) P= .003
SUPFR7	-0.1166 (30) P= .270	0.2089 (43) P= .089	-0.0699 (44) P= .326	0.3078 (30) P= .049	1.0000 (44) P=*****	0.3389 (44) P= .012
SUPFR8	0.1488 (32) P= .208	0.1696 (43) P= .138	0.3430 (54) P= .006	0.4809 (32) P= .003	0.3389 (44) P= .012	1.0000 (54) P=*****

Table 7B
Support Appraisal and Support Frequency Correlations for Female Cohort Students in Sixth, Seventh, & Eighth Grades

```
SUPAP6        1.0000      0.1082      0.0380      0.2630     -0.2235     -0.1019
             (    20)    (    19)    (    20)    (    20)    (    19)    (    20)
             P=*****     P= .330     P= .437     P= .131     P= .179     P= .334

SUPAP7        0.1082      1.0000      0.6392      0.2944      0.1192      0.1699
             (    19)    (    30)    (    30)    (    19)    (    29)    (    30)
             P= .330     P=*****     P=0.000     P= .111     P= .269     P= .185

SUPAP8        0.0380      0.6392      1.0000     -0.0890     -0.1409      0.1040
             (    20)    (    30)    (    36)    (    20)    (    29)    (    36)
             P= .437     P=0.000     P=*****     P= .354     P= .233     P= .273

SUPFR6        0.2630      0.2944     -0.0890      1.0000      0.0844      0.1394
             (    20)    (    19)    (    20)    (    20)    (    19)    (    20)
             P= .131     P= .111     P= .354     P=*****     P= .366     P= .279

SUPFR7       -0.2235      0.1192     -0.1409      0.0844      1.0000      0.4883
             (    19)    (    29)    (    29)    (    19)    (    29)    (    29)
             P= .179     P= .269     P= .233     P= .366     P=*****     P= .004

SUPFR8       -0.1019      0.1699      0.1040      0.1394      0.4883      1.0000
             (    20)    (    30)    (    36)    (    20)    (    29)    (    36)
             P= .334     P= .185     P= .273     P= .279     P= .004     P=*****
```

Table 8

Distress Scale Factors

	Percent variance
1. Depression symptoms.	74.6%
Feeling somewhat alone even when you are with friends.	
Feeling blue.	
Feeling at times that you just can't get going.	
Wondering if anything is worthwhile anymore.	
Spells of worrying.	
Restlessness so you can't sit still in your chair.	
2. Psychosomatic symptoms.	15.9%
Feeling weak all over.	
Heart beating too fast.	
Headaches or pains in your head.	
Having trouble in getting to sleep or staying asleep.	
Dizzy or fainting spells.	
(Restlessness so you can't sit still in your chair.)	
(Stomach aches.)	
3. Illness symptoms.	9.5%
Stuffiness or fullness in your head or nose.	
Stomach aches.	

Table 9

Means, Standard Deviations, and Intercorrelations of Distress and the Distress Factors: Depression Symptoms, Psychosomatic Symptoms, and Illness Symptoms

All

Variable	Cases	Mean	Std dev
DISTRES	163	1.9215	0.5587
DISTF1	163	1.9492	0.7118
DISTF2	163	1.7914	0.6314
DISTF3	163	2.1012	0.8519

Boys

Variable	Cases	Mean	Std dev
DISTRES	94	1.8957	0.5374
DISTF1	94	1.9286	0.6771
DISTF2	94	1.7915	0.6338
DISTF3	94	2.0000	0.7965

Girls

Variable	Cases	Mean	Std dev
DISTRES	69	1.9565	0.5885
DISTF1	69	1.9772	0.7605
DISTF2	69	1.7913	0.6329
DISTF3	69	2.2391	0.9099

All

	DISTRES	DISTF1	DISTF2	DISTF3
DISTRES	1.0000 (163) P=*****	0.8848 (163) P=0.000	0.8161 (163) P=0.000	0.6039 (163) P=0.000
DISTF1	0.8848 (163) P=0.000	1.0000 (163) P=*****	0.5206 (163) P=0.000	0.3481 (163) P=0.000
DISTF2	0.8161 (163) P=0.000	0.5206 (163) P=0.000	1.0000 (163) P=*****	0.4744 (163) P=0.000
DISTF3	0.6039 (163) P=0.000	0.3481 (163) P=0.000	0.4744 (163) P=0.000	1.0000 (163) P=*****

Table 10

Intercorrelations of THIS Subscales and Distress
for All Eighth Grade Groups

	All			PROJECT			OTHER		
	T	M	F	T	M	F	T	M	F
n	159	91	68	90	54	36	69	37	32
STRAP8T:									
STRFR8T	-.01	-.02	.05	-.16	-.17	-.09	.18	.18	.21
SUPAP8T	*** .49	*** .53	*** .40	*** .54	*** .46	*** .54	*** .44	*** .62	* .30
SUPFR8T	** .19	* .22	.11	* .22	.19	.06	.16	.23	.11
DISTRES	.08	-.01	.16	-.02	-.07	-.04	-.19	.06	* .32
STRFR8T:									
SUPAP8T	-.03	.11	-.18	.01	-.14	-.13	-.08	.06	-.22
SUPFR8T	* .15	.19	.11	.16	.18	.22	.13	.21	.02
DISTRES	*** .48	*** .39	*** .60	*** .41	* .28	*** .62	*** .57	*** .56	*** .60
SUPAP8T:									
SUPFR8T	*** .36	*** .37	** .33	*** .36	** .38	.20	*** .36	* .35	* .40
DISTRES	.04	.12	-.05	.04	.10	-.10	.05	.15	-.04
SUPFR8T:									
DISTRES	* .16	.07	* .26	** .28	.11	** .48	-.08	.01	-.02

*** = $p < .001$
** = $p < .01$
* = $p < .05$

Table 11
Means and Standard Deviations of THIS Subscales and Distress For All Boys and Girls With High, Medium, and Low Stressor Appraisal Scores

Boys

	STRESSOR APPRAISAL					
	>3.75		>3.45 ≤ 3.75		≤ 3.45	
	High		Medium		Low	
n	33		25		33	
	M.	S.D.	M.	S.D.	M.	S.D.
STRAP8T	4.06	.23	3.63	.09	3.27	.14
STRFR8T	1.70	.26	1.64	.24	1.71	.39
SUPAP8T	4.25	.38	4.12	.32	3.76	.41
SUPFR8T	1.97	.36	1.91	.32	1.85	.36
DISTRES	1.89	.59	1.74	.56	1.88	.46

Girls

	STRESSOR APPRAISAL					
	>3.95		>3.70 ≤ 3.95		≤ 3.70	
	High		Medium		Low	
n	25		18		25	
	M.	S.D.	M.	S.D.	M.	S.D.
STRAP8T	4.30	.25	3.85	.07	3.47	.25
STRFR8T	1.67	.29	1.63	.27	1.63	.31
SUPAP8T	4.37	.58	4.30	.31	3.91	.41
SUPFR8T	1.98	.33	2.07	.93	1.93	.37
DISTRES	2.10	.68	1.59	.48	1.84	.56

Table 12
Intercorrelations of THIS Subscales and Distress For Boys and Girls with High, Medium, and Low Stressor Appraisal Scores

	STRESSOR APPRAISAL					
	Boys			Girls		
	H	M	L	H	M	L
n	33	25	33	25	18	25
STRAP8T:						
STRFR8T	.23	.04	*-.32	.08	-.05	-.08
SUPAP8T	*.36	.29	.15	-.00	*-.49	*-.41
SUPFR8T	*.39	.30	.11	.03	-.16	.25
DISTRES	.12	*-.43	-.13	.07	-.17	-.10
STRFR8T:						
SUPAP8T	.11	*.36	.10	-.37	.03	-.17
SUPFR8T	.08	-.16	**.43	-.23	.32	.28
DISTRES	***.71	*.36	.22	***.65	.36	***.68
SUPAP8T:						
SUPFR8T	***.55	.15	.26	**.48	.12	.23
DISTRES	.07	.33	.06	-.18	-.02	-.18
SUPFR8T:						
DISTRES	.06	-.12	.24	.07	***.68	.26

*** = p <.001
** = p <.01
* = p <.05

Table 13
Intercorrelations of Stressor Dimension Scales and Distress Factors

		All			Project			Other		
		T	B	G	T	B	G	T	B	G
	n	159	91	68	90	54	36	69	37	32
STRA8D1	Assaults Safety & Integrity Ap:									
STRA8D2	Academic Trouble Ap	***.72	***.69	***.75	***.70	***.65	***.68	***.76	***.73	***.81
STRA8D3	Physical Attacks Ap	***.51	***.40	***.66	***.35	.21	**.46	***.70	***.63	***.79
STRF8D1	Academic Trouble Fr	**-.23	-.17	*-.24	*-.23	-.22		*-.23		*-.39
STRF8D2	Physical Assaults Fr					-.22		*.25	*.33	
STRF8D3	General School Disruption Fr	.13	.15					*.22		.29
DISTF1	Depression Symptoms									
DISTF2	Psychosomatic Symptoms									
DISTF3	Illness Symptoms					*-.24		.20	*.35	
DISTRES	Distress whole sc									
STRA8D2										
STRA8D3		***.50	***.39	***.65	***.45	**.38	**.46	***.56	**.39	***.77
STRF8D1		-.11			-.15					
STRF8D2					*-.22	**-.32		*.21	.23	
STRF8D3		.11	.17					*.25	.25	.25
DISTF1		.11						*.21		*.31
DISTF2										
DISTF3										
DISTRES		.10		.17				*.21	*.31	*.31
STRA8D3										
STRF8D1		-.12	-.16							
STRF8D2				*.21	*-.18	*-.24		*.28		**.45
STRF8D3										.26
DISTF1										
DISTF2										.26
DISTF3							-.22			

Table 13 cont'd

	All			Project			Other		
	T	B	G	T	B	G	T	B	G
n	159	91	68	90	54	36	69	37	32
STRF8D1									
STRF8D2	***.36	***.37	**.35	***.41	***.45	*.34	**.30	.25	*.37
STRF8D3	**.21	**.29		**.26	**.32			.25	
DISTF1	***.24	*.23	*.27	*.19		.27	**.33	*.37	*.30
DISTF2	**.22	.17	**.30	*.22		**.46	*.21	*.51	
DISTF3	*.17	**.24		*.21	*.24	.25		.26	
DISTRES	***.27	**.26	**.32	**.26	.18	**.40	**.30	**.38	
STRF8D2									
STRF8D3	***.27	**.21	*.27	***.33	*.29	**.39	.19	.25	
DISTF1	***.33	*.19	***.48	***.36		***.66	**.30	.25	*.34
DISTF2	***.25		***.47	*.23		***.67	*.27	*.30	.25
DISTF3	***.24	.15	**.34	*.19		**.44	**.28	*.31	.25
DISTRES	***.34	.16	***.54	***.34		***.70	**.34	*.31	*.38
STRF8D3									
DISTF1	***.40	***.32	***.51	***36	*.33	***.54	***.48	**.47	**.49
DISTF2	***.27	*.21	**.34	*.19		.26	***.57	*.31	**.47
DISTF3	*.15		.19			.23	**.23	*.29	
DISTRES	***.39	**.31	***.48	**.31	.21	**.43	***.50	**.45	***.57
STRFR8T									
DISTF1	***.47	***.40	***.56	***.41	*.31	***.57	***.55	***.54	***.58
DISTF2	***.35	*.21	***.53	**.29		***.59	***.42	**.40	**.45
DISTF3	***.26	***.40	*.24	*.24	.18	*.36	**.29	**.44	

***=$p<.001$ **=$p<.01$ *=$p<.05$ No asterisk=$p<.10$
T=total B=boys G=girls

Table 14

Selected intercorrelations of Support Dimension Scales, Distress Factors, and Stressor Frequency Dimensions

		All			Project			Other		
		T	B	G	T	B	G	T	B	G
	n	159	91	68	90	54	36	69	37	32
SUPA8D1	People Support Ap									
SUPA8D2	Friendship and Help Ap	***.88	***.84	***.92	***.87	***.85	***.88	***.89	***.82	***.94
SUPA8D3	Encouragement Ap	***.57	***.52	***.65	***.54	***.44	***.64	***.60	***.60	***.63
SUPF8D1	Encouragement Fr	***.24	***.35		.17	*.29		**.33	**.38	.29
SUPF8D2	Help and Friendship Fr	***.27	**.28	*.26	***.35	**.35	.22	*.30		.24
SUPF8D3	Verbal Support Fr	***.24	**.26	*.21	.15	.18		**.31	*.37	.29
SUPF8D4	Person Support Fr	***.36	***.33	***.39	***.38	***.34	*.36	**.34	*.33	
DISTRES	Distress whole score									
SUPA8D2 :	SUPA8D3	***.68	***.63	***.73	***.61	***.51	***.73	***.73	***.76	***.73
	SUPF8D1	***.26	***.32	.17	*.20	**.32		**.33	*.32	*.34
	SUPF8D2	***.26	**.25	*.27	**.27	*.26		*.25	.23	.28
	SUPF8D3	**.20	*.18	*.22				**.29	.23	*.35
	SUPF8D4	***.28	**.24	**.32	***.35	**.35	.26	*.21		*.34
	DISTRES									
SUPA8D3 :	SUPF8D1	**.18		*.23				*.24		*.33
	SUPF8D2				.16					
	SUPF8D3	*.17	.14	*.22	*.21	.20				.24
	SUPF8D4				.17					
	DISTRES	*.14	*.22				-.28	**.28	*.30	.26
SUPF8D1 :	SUPF8D2	***.50	***.50	***.49	***.51	***.48	***.49	***.49	***.54	**.45
	SUPF8D3	***.74	***.75	***.73	***.71	***.69	***.73	***.78	***.85	***.72
	SUPF8D4	***.44	***.45	***.42	***.43	***.45	*.34	***.46	**.47	**.48
	DISTRES	.13		.18	*.21		*.35			
SUPF8D2 :	SUPF8D3	***.48	***.47	***.48	***.42	**.37	**.45	***.54	***.61	***.45
	SUPF8D4	***.48	***.47	***.48	***.49	***.46	**.46	***.46	**.46	**.45
	DISTRES	*.17		***.31	**.29		***.52			.24

Table 14 cont'd

		All			Project			Other		
		T	B	G	T	B	G	T	B	G
	n	159	91	68	90	54	36	69	37	32
SUPF8D3 :	SUPF8D4	***.45	***.46	***.44	***.38	**.37	*.33	***.54	***.56	***.51
	DISTRES	*.13		*.23	**.25		**.41			
SUPF8D4 :	DISTRES	*.13	.14		**.25		.26	*.22		
SUPFR8T :	DISTF1	*.15		.17	**.26		**.43			
	DISTF2	.11		*.21	*.21		**.40			
	DISTF3			.20						
SUPF8D1 :	STRF8D1									
	STRF8D2		-.15	**.29		-.21	.25			
	STRF8D3	**.17	**.27					**.30	**.41	
SUPF8D2 :	STRF8D1	**.20	**.26		**.27	***.41				
	STRF8D2	***.27	**.26	**.29	**.29	*.26	**.39	*.24	.26	
	STRF8D3	**.22	**.27		*.24	*.30		.20	.25	
SUPF8D3 :	STRF8D1						.23			
	STRF8D2			*.27			*.33			-.24
	STRF8D3	.13	*.21					.23	*.33	
SUPF8D4 :	STRF8D1			-.17						-.24
	STRF8D2									-.27
	STRF8D3	.12	.21					.18	*.31	

***=p<.001 **=p<.01 *=p<.05 No asterisk=p<.10
T=total B=boys G=girls

Table 14 cont'd

		All			Project			Other		
		T	B	G	T	B	G	T	B	G
	n	159	91	68	90	54	36	69	37	32
SUPA8D1:	STRF8D1	*** -.24		*** -.38	-.15		-.25	*** -.36		*** -.55
	STRF8D2									
	STRF8D3		* .21	-.17					* .27	
SUPA8D2:	STRF8D1	** -.23		** -.34	-.17			** -.31		*** -.51
	STRF8D2									
	STRF8D3		.17						.23	
SUPA8D3:	STRF8D1	* -.14			-.17			* -.23	-.22	-.24
	STRF8D2					* .32				
	STRF8D3									-.27

Table 15

Means, Standard Deviations, and t-Values for Comparison of Scores for Cohort Boys and Girls on Selected Variables

	BOYS			GIRLS			t
VARIABLE	n	Mean	S.D.	n	Mean	S.D.	
Nowicki-Strickland L.C.	40	14.0	3.7	35	14.2	4.9	-0.25
Connell Cog L.C. Succ	28	9.6	2.9	25	10.2	3.8	-0.60
" Soc " "	28	11.5	3.1	25	11.2	3.3	0.35
" Phy " "	28	11.1	2.8	25	10.9	2.6	0.11
" Gen " "	28	14.7	2.8	25	14.9	3.0	-0.26
" Cog L.C. Fail	28	12.8	3.5	25	12.5	2.8	0.39
" Soc " "	28	14.1	2.7	25	14.0	2.4	0.26
" Phy " "	28	14.1	2.8	25	14.2	2.4	-0.18
Hare Total Self-Esteem	44	89.3	9.5	34	92.8	10,0	-1.57
" Home " "	44	31.2	5.7	34	33.5	5.1	-1.88
" Peer " "	44	29.7	4.1	34	29.4	2.8	0.42
" School " "	44	28.4	3.4	34	29.9	5.2	-1.54
Stressor Appraisal	53	3.6	.4	37	3.9	.4	-4.08***
Stressor Frequency	53	1.7	.3	37	1.6	.3	1.18
Support Appraisal	53	4.0	.3	37	4.2	.3	-2.17*
Support Frequency	53	1.9	.3	37	2.0	.3	-1.51
Distress	53	28.6	7.8	37	29.6	9.1	-0.55
Depression Symptoms	53	2.0	.7	37	2.0	.7	0.17
Psychosomatic Symptoms	53	1.7	.6	37	1.8	.7	-0.59
Illness Symptoms	53	2.0	.7	37	2.2	.9	-1.27
Reading Test Grade 6	49	6.6	1.8	30	6.3	1.5	0.69
" " " 7	44	8.8	1.8	35	8.1	1.9	1.76
Math " " 6	48	6.0	1.6	31	6.3	2.0	-0.61
" " " 7	35	6.5	1.5	26	6.2	1.4	0.78
GPA Midyear 7th Grade	47	67.7	10.4	36	74.7	9.3	-3.20**
GPA Midyear 8th Grade	54	67.1	10.4	38	73.8	9.7	-3.17**
Teacher Rating Pos Beh	33	108.	39.7	26	143.	26.6	-3.81***
" " Neg "	33	68.	20.0	26	54.	13.7	3.25**

***=p<.001 **=p<.01 *=p<.05 2-tail probability

Table 16

Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for All Cohort Students

	COGLCS	SOCLCS	PHYLCS	GENLCS	NSXS85	STRAPST	STRFRST	DISTRES	TSES85
COGLCS	1.0000 (53) P=*****	0.5286 (53) P=0.000	0.5554 (53) P=0.000	0.0740 (53) P= .299	-0.0721 (44) P= .321	-0.1711 (51) P= .115	0.2196 (51) P= .061	0.1166 (51) P= .208	-0.2906 (48) P= .023
SOCLCS	0.5286 (53) P=0.000	1.0000 (53) P=*****	0.4288 (53) P= .001	-0.0609 (53) P= .332	-0.0978 (44) P= .264	0.0356 (51) P= .402	-0.0322 (51) P= .411	0.0216 (51) P= .440	-0.1619 (48) P= .136
PHYLCS	0.5554 (53) P=0.000	0.4288 (53) P= .001	1.0000 (53) P=*****	0.1396 (53) P= .159	0.1105 (44) P= .238	-0.1532 (51) P= .142	0.4784 (51) P=0.000	0.2418 (51) P= .044	-0.4032 (48) P= .002
GENLCS	0.0740 (53) P= .299	-0.0609 (53) P= .332	0.1396 (53) P= .159	1.0000 (53) P=*****	0.0716 (44) P= .322	-0.0356 (51) P= .402	0.1349 (51) P= .173	-0.2124 (51) P= .067	0.1472 (46) P= .159
NSXS85	-0.0721 (44) P= .321	-0.0978 (44) P= .264	0.1105 (44) P= .238	0.0716 (44) P= .322	1.0000 (75) P=*****	0.0448 (74) P= .352	0.4753 (74) P=0.000	0.2000 (74) P= .044	-0.0902 (68) P= .232
STRAPST	-0.1711 (51) P= .115	0.0356 (51) P= .402	-0.1532 (51) P= .142	-0.0356 (51) P= .402	0.0448 (74) P= .352	1.0000 (90) P=*****	-0.1643 (90) P= .061	-0.0176 (90) P= .434	-0.0090 (76) P= .469
STRFRST	0.2196 (51) P= .061	-0.0322 (51) P= .411	0.4784 (51) P=0.000	0.1349 (51) P= .173	0.4753 (74) P=0.000	-0.1643 (90) P= .061	1.0000 (90) P=*****	0.4113 (90) P=0.000	-0.2669 (76) P= .010
DISTRES	0.1166 (51) P= .208	0.0216 (51) P= .440	0.2418 (51) P= .044	-0.2124 (51) P= .067	0.2000 (74) P= .044	-0.0176 (90) P= .434	0.4113 (90) P=0.000	1.0000 (90) P=*****	-0.1291 (76) P= .133
TSES85	-0.2906 (48) P= .023	-0.1619 (48) P= .136	-0.4032 (48) P= .002	0.1472 (48) P= .159	-0.0902 (68) P= .232	-0.0090 (76) P= .469	-0.2669 (76) P= .010	-0.1291 (76) P= .133	1.0000 (78) P=*****

Table 17

Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Boys

	COGLCS	SOCLCS	PHYLCS	GENLCS	NSXS85	STRAPST	STRFRQT	DISTRES	TSES85
COGLCS	1,0000 (27) P=******	0,6431 (27) P=0,000	0,4876 (27) P= ,005	0,2927 (27) P= ,069	0,0379 (21) P= .435	-0,1715 (27) P= ,196	0,4044 (27) P= ,018	-0,0169 (27) P= ,467	-0,4169 (22) P= ,027
SOCLCS	0,6431 (27) P=0,000	1,0000 (27) P=******	0,3174 (27) P= ,053	0,0502 (27) P= ,402	-0,0837 (21) P= .359	0,0924 (27) P= ,323	0,1840 (27) P= ,179	0,2043 (27) P= ,153	-0,5011 (22) P= ,009
PHYLCS	0,4876 (27) P= ,005	0,3174 (27) P= ,053	1,0000 (27) P=******	0,3559 (27) P= ,034	0,3253 (21) P= ,075	-0,2419 (27) P= ,112	0,6881 (27) P=0,000	0,2319 (27) P= ,122	-0,4459 (22) P= ,019
GENLCS	0,2927 (27) P= ,069	0,0502 (27) P= ,402	0,3559 (27) P= ,034	1,0000 (27) P=******	0,1691 (21) P= ,232	-0,1930 (27) P= ,167	0,3606 (27) P= ,032	-0,1018 (27) P= ,307	-0,0187 (22) P= .467
NSXS85	0,0379 (21) P= ,435	-0,0837 (21) P= ,359	0,3253 (21) P= ,075	0,1691 (21) P= ,232	1,0000 (41) P=******	-0,1613 (41) P= ,157	0,3726 (41) P= ,008	0,1906 (41) P= ,116	-0,1170 (37) P= ,245
STRAPST	-0,1715 (27) P= ,196	0,0924 (27) P= ,323	-0,2419 (27) P= ,112	-0,1930 (27) P= ,167	-0,1613 (41) P= ,157	1,0000 (54) P=******	-0,1686 (54) P= ,112	-0,0689 (54) P= ,310	-0,1227 (44) P= ,214
STRFRQT	0,4044 (27) P= ,018	0,1840 (27) P= ,179	0,6881 (27) P=0,000	0,3606 (27) P= ,032	0,3726 (41) P= ,008	-0,1686 (54) P= ,112	1,0000 (54) P=******	0,2763 (54) P= ,022	-0,2836 (44) P= ,031
DISTRES	-0,0169 (27) P= ,467	0,2043 (27) P= ,153	0,2319 (27) P= ,122	-0,1018 (27) P= ,307	0,1906 (41) P= ,116	-0,0689 (54) P= ,310	0,2763 (54) P= ,022	1,0000 (54) P=******	-0,0244 (44) P= ,437
TSES85	-0,4169 (22) P= ,027	-0.5011 (22) P= ,009	-0,4459 (22) P= ,019	-0,0187 (22) P= ,167	-0,1170 (37) P= ,245	-0,1227 (44) P= ,214	-0,2836 (44) P= ,031	-0,0244 (44) P= ,437	1,0000 (44) P=******

Table 18

Intercorrelations of Connell Locus of Control for Success Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Girls

	COGLCS	SOCLCS	PHYLCS	GENLCS	NSXS85	STRAPRT	STRFRQT	DISTRES	TSES85
COGLCS	1.0000 (24) P=*****	0.4820 (24) P= .009	0.6398 (24) P=0.000	-0.1383 (24) P= .260	-0.1478 (22) P= .256	-0.3261 (24) P= .060	0.0761 (24) P= .362	0.2184 (24) P= .153	-0.2321 (24) P= .138
SOCLCS	0.4820 (24) P= .009	1.0000 (24) P=*****	0.5641 (24) P= .002	-0.1780 (24) P= .203	-0.0995 (22) P= .330	0.0280 (24) P= .448	-0.2644 (24) P= .106	-0.1410 (24) P= .256	0.1401 (24) P= .257
PHYLCS	0.6398 (24) P=0.000	0.5641 (24) P= .002	1.0000 (24) P=*****	-0.1651 (24) P= .220	-0.0306 (22) P= .446	-0.0832 (24) P= .350	0.2207 (24) P= .150	0.2567 (24) P= .113	-0.3526 (24) P= .046
GENLCS	-0.1383 (24) P= .260	-0.1780 (24) P= .203	-0.1651 (24) P= .220	1.0000 (24) P=*****	0.0226 (22) P= .460	0.0833 (24) P= .349	-0.1072 (24) P= .309	-0.3141 (24) P= .068	0.3268 (24) P= .060
NSXS85	-0.1478 (22) P= .256	-0.0995 (22) P= .330	-0.0306 (22) P= .446	0.0226 (22) P= .460	1.0000 (33) P=*****	0.1819 (33) P= .155	0.6171 (33) P=0.000	0.2076 (33) P= .123	-0.1253 (30) P= .255
STRAPRT	-0.3261 (24) P= .060	0.0280 (24) P= .448	-0.0832 (24) P= .350	0.0833 (24) P= .349	0.1819 (33) P= .155	1.0000 (36) P=*****	-0.0899 (36) P= .301	-0.0351 (36) P= .419	-0.0052 (32) P= .489
STRFRQT	0.0761 (24) P= .362	-0.2644 (24) P= .106	0.2207 (24) P= .150	-0.1072 (24) P= .309	0.6171 (33) P=0.000	-0.0899 (36) P= .301	1.0000 (36) P=*****	0.6175 (36) P=0.000	-0.2445 (32) P= .089
DISTRES	0.2184 (24) P= .153	-0.1410 (24) P= .256	0.2567 (24) P= .113	-0.3141 (24) P= .068	0.2076 (33) P= .123	-0.0351 (36) P= .419	0.6175 (36) P=0.000	1.0000 (36) P=*****	-0.2897 (32) P= .054
TSES85	-0.2321 (24) P= .138	0.1401 (24) P= .257	-0.3526 (24) P= .046	0.3268 (24) P= .060	-0.1253 (30) P= .255	-0.0052 (32) P= .489	-0.2445 (32) P= .089	-0.2897 (32) P= .054	1.0000 (32) P=*****

Table 19

Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for All Cohort Students

	COGLCF	SOCLCF	PHYLCF	GENLCF	NSXS85	STRAPST	STRFRST	DISTRES	TSES85
COGLCF	1.0000 (53) P=******	0.3379 (53) P= .007	0.4032 (53) P= .001	0.2918 (53) P= .017	-0.1492 (44) P= .167	-0.0818 (51) P= .284	0.0558 (51) P= .349	0.2173 (51) P= .063	-0.1909 (48) P= .097
SOCLCF	0.3379 (53) P= .007	1.0000 (53) P=******	0.4879 (53) P=0.000	0.2661 (53) P= .027	0.0452 (44) P= .385	0.2907 (51) P= .019	0.3395 (51) P= .007	0.4436 (51) P= .001	-0.3289 (48) P= .011
PHYLCF	0.4032 (53) P= .001	0.4879 (53) P=0.000	1.0000 (53) P=******	0.4063 (53) P= .001	-0.1218 (44) P= .215	0.0495 (51) P= .365	0.2579 (51) P= .034	0.4676 (51) P=0.000	-0.2518 (48) P= .042
GENLCF	0.2918 (53) P= .017	0.2661 (53) P= .027	0.4063 (53) P= .001	1.0000 (53) P=******	-0.2461 (44) P= .054	0.2174 (51) P= .063	0.1271 (51) P= .187	0.2760 (51) P= .025	-0.0829 (48) P= .288
NSXS85	-0.1492 (44) P= .167	0.0452 (44) P= .385	-0.1218 (44) P= .215	-0.2461 (44) P= .054	1.0000 (75) P=******	0.0448 (74) P= .352	0.4753 (74) P=0.000	0.2000 (74) P= .044	-0.0902 (68) P= .232
STRAPST	-0.0818 (51) P= .284	0.2907 (51) P= .019	0.0495 (51) P= .365	0.2174 (51) P= .063	0.0448 (74) P= .352	1.0000 (90) P=******	-0.1643 (90) P= .061	-0.0176 (90) P= .434	-0.0090 (76) P= .469
STRFRST	0.0558 (51) P= .349	0.3395 (51) P= .007	0.2579 (51) P= .034	0.1271 (51) P= .187	0.4753 (74) P=0.000	-0.1643 (90) P= .061	1.0000 (90) P=******	0.4113 (90) P=0.000	-0.2669 (76) P= .010
DISTRES	0.2173 (51) P= .063	0.4436 (51) P= .001	0.4676 (51) P=0.000	0.2760 (51) P= .025	0.2000 (74) P= .044	-0.0176 (90) P= .434	0.4113 (90) P=0.000	1.0000 (90) P=******	-0.1291 (76) P= .133
TSES85	-0.1909 (48) P= .097	-0.3289 (48) P= .011	-0.2518 (48) P= .042	-0.0829 (48) P= .288	-0.0902 (68) P= .232	-0.0090 (76) P= .469	-0.2669 (76) P= .010	-0.1291 (76) P= .133	1.0000 (78) P=******

Table 20

Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Boys

	CDGLCF	SOCLCF	PHYLCF	GENLCF	NSXS85	STRAPBT	STRFRBT	DISTRES	TSES85
CDGLCF	1.0000 (27) P=*****	0.4242 (27) P= .014	0.5396 (27) P= .002	0.3513 (27) P= .036	-0.2403 (21) P= .147	-0.1554 (27) P= .220	0.1424 (27) P= .239	0.2826 (27) P= .077	-0.4072 (22) P= .030
SOCLCF	0.4242 (27) P= .014	1.0000 (27) P=*****	0.5121 (27) P= .003	0.3356 (27) P= .043	0.1331 (21) P= .283	0.3973 (27) P= .020	0.5011 (27) P= .004	0.4336 (27) P= .012	-0.4216 (22) P= .025
PHYLCF	0.5396 (27) P= .002	0.5121 (27) P= .003	1.0000 (27) P=*****	0.5233 (27) P= .003	-0.1776 (21) P= .221	0.1828 (27) P= .181	0.3335 (27) P= .045	0.3166 (27) P= .054	-0.2375 (22) P= .144
GENLCF	0.3513 (27) P= .036	0.3356 (27) P= .043	0.5233 (27) P= .003	1.0000 (27) P=*****	-0.3644 (21) P= .052	0.0606 (27) P= .382	0.0815 (27) P= .343	0.3310 (27) P= .046	-0.0731 (22) P= .373
NSXS85	-0.2403 (21) P= .147	0.1331 (21) P= .283	-0.1776 (21) P= .221	-0.3644 (21) P= .052	1.0000 (41) P=*****	-0.1613 (41) P= .157	0.3726 (41) P= .008	0.1906 (41) P= .116	-0.1170 (37) P= .245
STRAPBT	-0.1554 (27) P= .220	0.3973 (27) P= .020	0.1828 (27) P= .181	0.0606 (27) P= .382	-0.1613 (41) P= .157	1.0000 (54) P=*****	-0.1686 (54) P= .112	-0.0689 (54) P= .310	-0.1227 (44) P= .214
STRFRBT	0.1424 (27) P= .239	0.5011 (27) P= .004	0.3335 (27) P= .045	0.0815 (27) P= .343	0.3726 (41) P= .008	-0.1686 (54) P= .112	1.0000 (54) P=*****	0.2763 (54) P= .022	-0.2836 (44) P= .031
DISTRES	0.2826 (27) P= .077	0.1336 (27) P= .012	0.3166 (27) P= .051	0.3310 (27) P= .046	0.1906 (41) P= .116	-0.0689 (54) P= .310	0.2763 (54) P= .022	1.0000 (54) P=*****	-0.0244 (44) P= .437
TSES85	-0.4072 (22) P= .030	-0.4216 (22) P= .025	-0.2375 (22) P= .144	-0.0731 (22) P= .373	-0.1170 (37) P= .245	-0.1227 (44) P= .214	-0.2836 (44) P= .031	-0.0244 (44) P= .437	1.0000 (44) P=*****

Table 21

Intercorrelations of Connell Locus of Control for Failure Constructed Scores, Nowicki-Strickland Locus of Control, Stressor Appraisal, Stressor Frequency, Distress, and Hare Total Self-Esteem for Girls

	COGLCF	SOCLCF	PHYLCF	GENLCF	NSXS85	STRAPST	STRFRST	DISTRES	TSES85
COGLCF	1.0000 (24) P=*****	0.1990 (24) P= .176	0.1952 (24) P= .180	0.2312 (24) P= .138	-0.0275 (22) P= .452	0.0778 (24) P= .359	-0.0722 (24) P= .369	0.1467 (24) P= .247	0.0506 (24) P= .407
SOCLCF	0.1990 (24) P= .176	1.0000 (24) P=*****	0.5199 (24) P= .005	0.2225 (24) P= .148	0.0322 (22) P= .443	0.2246 (24) P= .146	0.1290 (24) P= .274	0.4649 (24) P= .011	-0.2092 (24) P= .163
PHYLCF	0.1952 (24) P= .180	0.5199 (24) P= .005	1.0000 (24) P=*****	0.2237 (24) P= .147	-0.1059 (22) P= .319	-0.1540 (24) P= .236	0.1599 (24) P= .228	0.6509 (24) P=0.000	-0.3050 (24) P= .074
GENLCF	0.2312 (24) P= .138	0.2225 (24) P= .148	0.2237 (24) P= .147	1.0000 (24) P=*****	-0.1761 (22) P= .217	0.3730 (24) P= .036	0.2000 (24) P= .174	0.2310 (24) P= .139	-0.1189 (24) P= .290
NSXS85	-0.0275 (22) P= .452	0.0322 (22) P= .443	-0.1059 (22) P= .319	-0.1761 (22) P= .217	1.0000 (33) P=*****	0.1819 (33) P= .155	0.6171 (33) P=0.000	0.2076 (33) P= .123	-0.1253 (30) P= .255
STRAPST	0.0778 (24) P= .359	0.2246 (24) P= .146	-0.1540 (24) P= .236	0.3730 (24) P= .036	0.1819 (33) P= .155	1.0000 (36) P=*****	-0.0899 (36) P= .301	-0.0351 (36) P= .419	-0.0052 (32) P= .489
STRFRST	-0.0722 (24) P= .369	0.1290 (24) P= .274	0.1599 (24) P= .228	0.2000 (24) P= .174	0.6171 (33) P=0.000	-0.0899 (36) P= .301	1.0000 (36) P=*****	0.6175 (36) P=0.000	-0.2445 (32) P= .089
DISTRES	0.1467 (24) P= .247	0.4649 (24) P= .011	0.6509 (24) P=0.000	0.2310 (24) P= .139	0.2076 (33) P= .123	-0.0351 (36) P= .419	0.6175 (36) P=0.000	1.0000 (36) P=*****	-0.2897 (32) P= .054
TSES85	0.0506 (24) P= .407	-0.2092 (24) P= .163	-0.3050 (24) P= .074	-0.1189 (24) P= .290	-0.1253 (30) P= .255	-0.0052 (32) P= .489	-0.2445 (32) P= .089	-0.2897 (32) P= .054	1.0000 (32) P=*****

Table 22

Means and Standard Deviations of Stressor Appraisal, Stressor Frequency, Locus of Control, and Distress for Students Above and Below the Locus of Control Median Scores

Nowicki-Strickland > 14

Variable	Cases	Mean	Std dev
STRAP8T	34	3.7853	0.4575
STRFR8T	34	1.7721	0.3666
NSXS85	34	17.9118	2.2879
DISTRES	34	1.9824	0.6242

Nowicki-Strickland ≤ 14

Variable	Cases	Mean	Std dev
STRAP8T	40	3.6663	0.3375
STRFR8T	40	1.5575	0.2433
NSXS85	40	10.7000	2.3005
DISTRES	40	1.8417	0.4398

Table 23

Correlations of Stressor Appraisal, Stressor Frequency,
Locus of Control, and Distress for Students
Above and Below the Locus of Control Median Scores

Nowicki-Strickland > 14

	STRAPOT	STRFROT	NSXS85	DISTRES
STRAPOT	1.0000 (34) P=*****	-0.2166 (34) P= .109	-0.1373 (34) P= .219	-0.0816 (34) P= .323
STRFROT	-0.2166 (34) P= .109	1.0000 (34) P=*****	0.4323 (34) P= .005	0.6475 (34) P=0.000
NSXS85	-0.1373 (34) P= .219	0.4323 (34) P= .005	1.0000 (34) P=*****	0.2719 (34) P= .060
DISTRES	-0.0816 (34) P= .323	0.6475 (34) P=0.000	0.2719 (34) P= .060	1.0000 (34) P=*****

Nowicki-Strickland ≤ 14

	STRAPOT	STRFROT	NSXS85	DISTRES
STRAPOT	1.0000 (40) P=*****	-0.3162 (40) P= .023	-0.1802 (40) P= .133	-0.0818 (40) P= .308
STRFROT	-0.3162 (40) P= .023	1.0000 (40) P=*****	0.3409 (40) P= .016	0.0929 (40) P= .284
NSXS85	-0.1802 (40) P= .133	0.3409 (40) P= .016	1.0000 (40) P=*****	0.0465 (40) P= .388
DISTRES	-0.0818 (40) P= .308	0.0929 (40) P= .284	0.0465 (40) P= .388	1.0000 (40) P=*****

Table 24

Results of Regression of Distress on Nowicki-Strickland Externality, Stressor Frequency, and Externality-Stressor Frequency Interaction

74 cohort boys and girls

Step	Multr	Rsq	Adjrsq	F(equ)(	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.2000	0.0400	0.0267	2.999	.088	0.0400	2.999	.088	IN:	NSxSB5	0.2000	0.2000
2	0.4652	0.2164	0.1943	9.804	0.000	0.1764	15.984	0.000	IN:	STRFR0T	0.4774	0.4646
3	0.5276	0.2783	0.2474	8.999	0.000	0.0619	6.008	.017	IN:	NSxSTR	1.6302	0.3958

Table 25

Stressor Frequency and Distress Means and Standard Deviations for Students Above and Below Median GPA

GPA2P ≤ 70.1

Variable	Cases	Mean	Std dev
GPA2P	47	61.5319	6.6862
DISTRES	46	29.3696	7.6749
DISTF1	46	196.8478	63.5197
DISTF2	46	127.8261	61.4243
DISTF3	46	226.0870	78.6971
STRFRST	46	1.7304	0.3212
STRFR5	46	1.7187	0.3264

GPA2P > 70.1

Variable	Cases	Mean	Std dev
GPA2P	45	78.5556	5.9067
DISTRES	44	28.5909	8.0811
DISTF1	44	188.3636	75.6482
DISTF2	44	176.3636	67.8864
DISTF3	44	193.1818	81.6329
STRFRST	44	1.5630	0.2651
STRFR5	44	1.5824	0.2952

Table 26

Intercorrelations of Stressor Frequency, Distress, and Midyear Grade Point Average for Students Whose GPA2P is Below Median

	GPA2P	DISTRES	DISTF1	DISTF2	DISTF3	STRFRST	STRFRS
GPA2P	1.0000 (47) P=*****	0.0548 (46) P= .359	0.0718 (46) P= .318	0.0333 (46) P= .413	-0.1144 (46) P= .225	-0.1606 (46) P= .143	-0.1117 (46) P= .230
DISTRES	0.0548 (46) P= .359	1.0000 (46) P=*****	0.8548 (46) P=0.000	0.7842 (46) P=0.000	0.5944 (46) P=0.000	0.2252 (46) P= .066	0.2021 (46) P= .089
DISTF1	0.0718 (46) P= .318	0.8548 (46) P=0.000	1.0000 (46) P=*****	0.4211 (46) P= .002	0.3371 (46) P= .011	0.2395 (46) P= .054	0.2379 (46) P= .056
DISTF2	0.0333 (46) P= .413	0.7842 (46) P=0.000	0.4214 (46) P= .002	1.0000 (46) P=*****	0.4073 (46) P= .002	0.0789 (46) P= .301	0.0187 (46) P= .451
DISTF3	-0.1144 (46) P= .225	0.5944 (46) P=0.000	0.3371 (46) P= .011	0.4073 (46) P= .002	1.0000 (46) P=*****	0.1108 (46) P= .232	0.1244 (46) P= .205
STRFRST	-0.1606 (46) P= .143	0.2252 (46) P= .066	0.2395 (46) P= .054	0.0789 (46) P= .301	0.1108 (46) P= .232	1.0000 (46) P=*****	0.9783 (46) P=0.000
STRFRS	-0.1117 (46) P= .230	0.2021 (46) P= .089	0.2379 (46) P= .056	0.0187 (46) P= .451	0.1244 (46) P= .205	0.9783 (46) P=0.000	1.0000 (46) P=*****

Table 27

Intercorrelations of Stressor Frequency, Distress, and Midyear Grade Point Average for Students Whose GPA2P is Above Median

	GPA2P	DISTRES	DISTF1	DISTF2	DISTF3	STRFRST	STRFR5
GPA2P	1.0000 (45) P=*****	-0.0490 (44) P= .376	0.0067 (44) P= .483	-0.1170 (44) P= .225	0.0098 (44) P= .475	-0.1380 (44) P= .186	-0.1545 (44) P= .158
DISTRES	-0.0490 (44) P= .376	1.0000 (44) P=*****	0.9323 (44) P=0.000	0.8902 (44) P=0.000	0.7434 (44) P=0.000	0.6070 (44) P=0.000	0.6672 (44) P=0.000
DISTF1	0.0067 (44) P= .483	0.9323 (44) P=0.000	1.0000 (44) P=*****	0.7010 (44) P=0.000	0.5611 (44) P=0.000	0.6172 (44) P=0.000	0.6696 (44) P=0.000
DISTF2	-0.1170 (44) P= .225	0.8902 (44) P=0.000	0.7010 (44) P=0.000	1.0000 (44) P=*****	0.7323 (44) P=0.000	0.5464 (44) P=0.000	0.5976 (44) P=0.000
DISTF3	0.0098 (44) P= .475	0.7434 (44) P=0.000	0.5611 (44) P=0.000	0.7323 (44) P=0.000	1.0000 (44) P=*****	0.3028 (44) P= .023	0.3547 (44) P= .009
STRFRST	-0.1380 (44) P= .186	0.6070 (44) P=0.000	0.6172 (44) P=0.000	0.5464 (44) P=0.000	0.3028 (44) P= .023	1.0000 (44) P=*****	0.9823 (44) P=0.000
STRFR5	-0.1545 (44) P= .158	0.6672 (44) P=0.000	0.6696 (44) P=0.000	0.5976 (44) P=0.000	0.3547 (44) P= .009	0.9823 (44) P=0.000	1.0000 (44) P=*****

Table 28

Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores

All Cohort Students

	HSES85	PSES85	SSES85	COGLCS	SOCLCS	PHYLCS	STRAPBT	STRFRBT	SUPAPBT	SUPFRBT
HSES85	1.0000 (78) P=******	0.2089 (78) P= .033	0.3575 (78) P= .001	-0.3947 (48) P= .003	-0.1610 (48) P= .137	-0.4253 (48) P= .001	-0.0606 (76) P= .302	-0.2211 (76) P= .027	-0.1126 (76) P= .167	-0.2703 (76) P= .009
PSES85	0.2099 (78) P= .033	1.0000 (78) P=******	0.3018 (78) P= .004	-0.0834 (48) P= .287	-0.1096 (48) P= .229	0.0087 (48) P= .477	0.0282 (76) P= .405	-0.1096 (76) P= .173	-0.0096 (76) P= .467	0.0243 (76) P= .417
SSES85	0.3575 (78) P= .001	0.3018 (78) P= .004	1.0000 (78) P=******	-0.0585 (48) P= .346	-0.0518 (48) P= .363	-0.3429 (48) P= .009	0.0328 (76) P= .389	-0.2351 (76) P= .020	-0.2054 (76) P= .038	-0.0672 (76) P= .282
COGLCS	-0.3947 (48) P= .003	-0.0834 (48) P= .287	-0.0585 (48) P= .346	1.0000 (53) P=******	0.5286 (53) P=0.000	0.5554 (53) P=0.000	-0.1711 (51) P= .115	0.2196 (51) P= .061	-0.2565 (51) P= .035	0.1582 (51) P= .134
SOCLCS	-0.1610 (48) P= .137	-0.1096 (48) P= .229	-0.0518 (48) P= .363	0.5286 (53) P=0.000	1.0000 (53) P=******	0.4288 (53) P= .001	0.0356 (51) P= .402	-0.0322 (51) P= .411	-0.1944 (51) P= .086	-0.2448 (51) P= .042
PHYLCS	-0.4253 (48) P= .001	0.0087 (48) P= .477	-0.3429 (48) P= .009	0.5554 (53) P=0.000	0.4298 (53) P= .001	1.0000 (53) P=******	-0.1532 (51) P= .142	0.4784 (51) P=0.000	-0.1201 (51) P= .201	0.1075 (51) P= .226
STRAPBT	-0.0606 (76) P= .302	0.0282 (76) P= .405	0.0328 (76) P= .389	-0.1711 (51) P= .115	0.0356 (51) P= .402	-0.1532 (51) P= .142	1.0000 (90) P=******	-0.1643 (90) P= .061	0.4754 (90) P=0.000	0.0052 (90) P= .480
STRFRBT	-0.2211 (76) P= .027	-0.1096 (76) P= .173	-0.2351 (75) P= .020	0.2196 (51) P= .061	-0.0322 (51) P= .411	0.4784 (51) P=0.000	-0.1643 (90) P= .061	1.0000 (90) P=******	-0.0220 (90) P= .419	0.1689 (90) P= .056
SUPAPBT	-0.1126 (76) P= .167	-0.0096 (76) P= .467	-0.2054 (76) P= .038	-0.2565 (51) P= .035	-0.1914 (51) P= .086	-0.1201 (51) P= .201	0.4754 (90) P=0.000	-0.0220 (90) P= .419	1.0000 (90) P=******	-0.1038 (90) P= .165
SUPFRBT	-0.2703 (76) P= .009	0.0243 (76) P= .417	-0.0672 (76) P= .282	0.1582 (51) P= .134	-0.2418 (51) P= .042	0.1075 (51) P= .226	0.0052 (90) P= .480	0.1689 (90) P= .056	-0.1038 (90) P= .165	1.0000 (90) P=******

Table 29

Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores

Boys

	HSES85	PSES85	SSES85	COGLCS	SOCLCS	PHYLCS	STRAPBT	STRFRBT	SUPAPBT	SUPFRBT
HSES85	1.0000 (44) P=*****	0.2259 (44) P= .070	0.2486 (44) P= .052	-0.3924 (23) P= .032	-0.4149 (23) P= .025	-0.3384 (23) P= .057	-0.2962 (43) P= .027	-0.1889 (43) P= .112	-0.0928 (43) P= .277	-0.3243 (43) P= .017
PSES85	0.2259 (44) P= .070	1.0000 (44) P=*****	0.3406 (44) P= .012	-0.2937 (23) P= .087	-0.5032 (23) P= .007	-0.1298 (23) P= .277	0.0828 (43) P= .299	-0.0359 (43) P= .410	0.0338 (43) P= .415	0.1345 (43) P= .195
SSES85	0.2486 (44) P= .052	0.3406 (44) P= .012	1.0000 (44) P=*****	0.0047 (23) P= .491	-0.0618 (23) P= .390	-0.5225 (23) P= .005	-0.0404 (43) P= .399	-0.3709 (43) P= .007	-0.1983 (43) P= .101	-0.0429 (43) P= .392
COGLCS	-0.3924 (23) P= .032	-0.2937 (23) P= .087	0.0047 (23) P= .491	1.0000 (28) P=*****	0.6025 (28) P=0.000	0.4903 (28) P= .004	-0.1715 (27) P= .196	0.4044 (27) P= .018	-0.2453 (27) P= .109	-0.0278 (27) P= .445
SOCLCS	-0.4149 (23) P= .025	-0.5032 (23) P= .007	-0.0618 (23) P= .390	0.6025 (28) P=0.000	1.0000 (28) P=*****	0.3082 (28) P= .055	0.0924 (27) P= .323	0.1840 (27) P= .179	-0.1038 (27) P= .303	-0.2685 (27) P= .088
PHYLCS	-0.3384 (23) P= .057	-0.1298 (23) P= .277	-0.5225 (23) P= .005	0.4903 (28) P= .004	0.3082 (28) P= .055	1.0000 (26) P=*****	-0.2419 (27) P= .112	0.6881 (27) P=0.000	-0.0994 (27) P= .311	0.0296 (27) P= .442
STRAPBT	-0.2962 (43) P= .027	0.0828 (43) P= .299	-0.0404 (43) P= .399	-0.1715 (27) P= .196	0.0924 (27) P= .323	-0.2419 (27) P= .112	1.0000 (53) P=*****	-0.1477 (53) P= .146	0.4325 (53) P= .001	0.0381 (53) P= .393
STRFRBT	-0.1889 (43) P= .112	-0.0359 (43) P= .410	-0.3709 (43) P= .007	0.4044 (27) P= .018	0.1840 (27) P= .179	0.6881 (27) P=0.000	-0.1477 (53) P= .146	1.0000 (53) P=*****	0.0566 (53) P= .344	0.0821 (53) P= .279
SUPAPBT	-0.0928 (43) P= .277	0.0338 (43) P= .415	-0.1983 (43) P= .101	-0.2453 (27) P= .109	-0.1038 (27) P= .303	-0.0994 (27) P= .311	0.4325 (53) P= .001	0.0566 (53) P= .344	1.0000 (53) P=*****	-0.0672 (53) P= .316
SUPFRBT	-0.3243 (43) P= .017	0.1345 (43) P= .195	-0.0429 (43) P= .392	-0.0278 (27) P= .445	-0.2685 (27) P= .088	0.0296 (27) P= .442	0.0381 (53) P= .393	0.0821 (53) P= .279	-0.0672 (53) P= .316	1.0000 (53) P=*****

Table 30

Correlations of Hare Self-Esteem Domain Scores, Connell Locus of Control for Success Domain Scores, and Stressor and Support Appraisal and Frequency Whole Scores

Girls

	HSES85	PSES85	SSES85	COGLCS	SOCLCS	PHYLCS	STRAPWT	STRFRWT	SUPAPWT	SUPFRWT
HSES85	1.0000 (34) P=*****	0.2272 (34) P= .098	0.4372 (34) P= .005	-0.4230 (25) P= .018	0.0521 (25) P= .402	-0.5083 (25) P= .005	0.0614 (33) P= .367	-0.2529 (33) P= .078	-0.2933 (33) P= .049	-0.2852 (33) P= .054
PSES85	0.2272 (34) P= .098	1.0000 (34) P=*****	0.3447 (34) P= .023	0.2012 (25) P= .167	0.4164 (25) P= .019	0.2197 (25) P= .146	-0.0294 (33) P= .436	-0.2564 (33) P= .075	-0.0776 (33) P= .334	-0.1569 (33) P= .192
SSES85	0.4372 (34) P= .005	0.3447 (34) P= .023	1.0000 (34) P=*****	-0.0922 (25) P= .331	-0.0462 (25) P= .413	-0.2684 (25) P= .097	-0.0406 (33) P= .411	-0.1239 (33) P= .246	-0.3328 (33) P= .029	-0.1347 (33) P= .227
COGLCS	-0.4230 (25) P= .018	0.2012 (25) P= .167	-0.0922 (25) P= .331	1.0000 (25) P=*****	0.4844 (25) P= .007	0.6359 (25) P=0.000	-0.3261 (24) P= .060	0.0761 (24) P= .362	-0.3629 (24) P= .041	0.2776 (24) P= .095
SOCLCS	0.0521 (25) P= .402	0.4164 (25) P= .019	-0.0462 (25) P= .413	0.4844 (25) P= .007	1.0000 (25) P=*****	0.5642 (25) P= .002	0.0200 (24) P= .448	-0.2644 (24) P= .106	-0.3055 (24) P= .073	-0.2138 (24) P= .158
PHYLCS	-0.5083 (25) P= .005	0.2197 (25) P= .146	-0.2684 (25) P= .097	0.6359 (25) P=0.000	0.5642 (25) P= .002	1.0000 (25) P=*****	-0.0832 (24) P= .350	0.2207 (24) P= .150	-0.1707 (24) P= .213	0.1939 (24) P= .182
STRAPWT	0.0614 (33) P= .367	-0.0294 (33) P= .436	-0.0406 (33) P= .411	-0.3261 (24) P= .060	0.0200 (24) P= .448	-0.0832 (24) P= .350	1.0000 (37) P=*****	-0.0942 (37) P= .290	0.4307 (37) P= .004	-0.2031 (37) P= .114
STRFRWT	-0.2529 (33) P= .078	-0.2564 (33) P= .075	-0.1239 (33) P= .246	0.0761 (24) P= .362	-0.2644 (24) P= .106	0.2207 (24) P= .150	-0.0942 (37) P= .290	1.0000 (37) P=*****	-0.0722 (37) P= .336	0.3391 (37) P= .020
SUPAPWT	-0.2933 (33) P= .049	-0.0776 (33) P= .334	-0.3328 (33) P= .029	-0.3629 (24) P= .041	-0.3055 (24) P= .073	-0.1707 (24) P= .213	0.4307 (37) P= .004	-0.0722 (37) P= .336	1.0000 (37) P=*****	-0.2581 (37) P= .061
SUPFRWT	-0.2852 (33) P= .054	-0.1569 (33) P= .192	-0.1347 (33) P= .227	0.2775 (24) P= .095	-0.2138 (24) P= .158	0.1939 (24) P= .182	-0.2031 (37) P= .114	0.3391 (37) P= .020	-0.2581 (37) P= .061	1.0000 (37) P=*****

Table 31

Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores

All Cohort Students

	STRAPST	STRFRST	DISTRES	HOMEPEER	HOMEADLT	SCHLPEER	SCHLADLT	HOMEFR	SCHLFR	ADULFR	PEERFR
STRAPST	1.0000 (90) P=******	-0.1643 (90) P= .061	-0.0176 (90) P= .434	0.3068 (90) P= .002	0.1229 (90) P= .124	0.2406 (90) P= .011	0.0557 (90) P= .301	0.2678 (90) P= .005	0.1847 (90) P= .041	0.1185 (90) P= .133	0.3495 (90) P=0.000
STRFRST	-0.1643 (90) P= .061	1.0000 (90) P=******	0.4113 (90) P=0.000	-0.0833 (90) P= .218	0.0287 (90) P= .394	0.2068 (90) P= .025	0.1819 (90) P= .043	-0.0353 (90) P= .371	0.2408 (90) P= .011	0.1357 (90) P= .101	0.0713 (90) P= .252
DISTRES	-0.0176 (90) P= .434	0.4113 (90) P=0.000	1.0000 (90) P=******	0.2021 (90) P= .028	0.1176 (90) P= .135	0.2200 (90) P= .019	0.1722 (90) P= .052	0.1985 (90) P= .030	0.2431 (90) P= .010	0.1894 (90) P= .037	0.2678 (90) P= .005
HOMEPEER	0.3068 (90) P= .002	-0.0833 (90) P= .218	0.2021 (90) P= .028	1.0000 (90) P=******	0.3127 (90) P= .001	0.2369 (90) P= .012	0.2772 (90) P= .004	0.8199 (90) P=0.000	0.3180 (90) P= .001	0.3881 (90) P=0.000	0.8050 (90) P=0.000
HOMEADLT	0.1229 (90) P= .124	0.0287 (90) P= .394	0.1176 (90) P= .135	0.3127 (90) P= .001	1.0000 (90) P=******	0.2561 (90) P= .007	0.1578 (90) P= .069	0.8001 (90) P=0.000	0.2569 (90) P= .007	0.7754 (90) P=0.000	0.3629 (90) P=0.000
SCHLPEER	0.2406 (90) P= .011	0.2068 (90) P= .025	0.2200 (90) P= .019	0.2369 (90) P= .012	0.2561 (90) P= .007	1.0000 (90) P=******	0.3042 (90) P= .002	0.3039 (90) P= .002	0.8122 (90) P=0.000	0.3673 (90) P=0.000	0.7671 (90) P=0.000
SCHLADLT	0.0557 (90) P= .301	0.1819 (90) P= .043	0.1722 (90) P= .052	0.2772 (90) P= .004	0.1578 (90) P= .069	0.3042 (90) P= .002	1.0000 (90) P=******	0.2701 (90) P= .005	0.8028 (90) P=0.000	0.7459 (90) P=0.000	0.3688 (90) P=0.000
HOMEFR	0.2678 (90) P= .005	-0.0353 (90) P= .371	0.1985 (90) P= .030	0.8199 (90) P=0.000	0.8001 (90) P=0.000	0.3039 (90) P= .002	0.2701 (90) P= .005	1.0000 (90) P=******	0.3556 (90) P=0.000	0.7124 (90) P=0.000	0.7270 (90) P=0.000
SCHLFR	0.1847 (90) P= .041	0.2408 (90) P= .011	0.2431 (90) P= .010	0.3180 (90) P= .001	0.2569 (90) P= .007	0.8122 (90) P=0.000	0.8028 (90) P=0.000	0.3556 (90) P=0.000	1.0000 (90) P=******	0.6867 (90) P=0.000	0.7060 (90) P=0.000
ADULFR	0.1185 (90) P= .133	0.1357 (90) P= .101	0.1894 (90) P= .037	0.3881 (90) P=0.000	0.7754 (90) P=0.000	0.3673 (90) P=0.000	0.7459 (90) P=0.000	0.7124 (90) P=0.000	0.6867 (90) P=0.000	1.0000 (90) P=******	0.4806 (90) P=0.000
PEERFR	0.3495 (90) P=0.000	0.0713 (90) P= .252	0.2678 (90) P= .005	0.8050 (90) P=0.000	0.3629 (90) P=0.000	0.7671 (90) P=0.000	0.3688 (90) P=0.000	0.7270 (90) P=0.000	0.7060 (90) P=0.000	0.4806 (90) P=0.000	1.0000 (90) P=******

Table 32

Correlations of Stressor Appraisal, Stressor Freqency, and Distress with THIS Support Availability Item Scores and Constructed Scores

Boys

	STRAPST	STRFRST	DISTRES	HOMEPEER	HOMEADLT	SCHLPEER	SCHLADLT	HOMEFR	SCHLFR	ADULFR	PEERFR
STRAPST	1.0000 (54) P=******	-0.1686 (54) P= .112	-0.0689 (54) P= .310	0.2138 (54) P= .060	0.0687 (54) P= .311	0.2116 (54) P= .062	-0.1038 (54) P= .228	0.1691 (54) P= .111	0.0669 (54) P= .315	-0.0178 (54) P= .449	0.2670 (54) P= .025
STRFRST	-0.1686 (54) P= .112	1.0000 (54) P=******	0.2763 (54) P= .022	-0.0491 (54) P= .362	0.0974 (54) P= .242	0.2999 (54) P= .014	0.3310 (54) P= .007	0.0294 (54) P= .417	0.3774 (54) P= .002	0.2663 (54) P= .026	0.1519 (54) P= .136
DISTRES	-0.0689 (54) P= .310	0.2763 (54) P= .022	1.0000 (54) P=******	0.1560 (54) P= .130	0.0245 (54) P= .430	0.3264 (54) P= .008	0.1599 (54) P= .124	0.1079 (54) P= .219	0.2924 (54) P= .016	0.1137 (54) P= .207	0.3000 (54) P= .014
HOMEPEER	0.2138 (54) P= .060	-0.0491 (54) P= .362	0.1560 (54) P= .130	1.0000 (54) P=******	0.3897 (54) P= .002	0.2694 (54) P= .024	0.1806 (54) P= .096	0.8320 (54) P=0.000	0.2701 (54) P= .024	0.3683 (54) P= .003	0.8080 (54) P=0.000
HOMEADLT	0.0687 (54) P= .311	0.0974 (54) P= .242	0.0245 (54) P= .430	0.3897 (54) P= .002	1.0000 (54) P=******	0.2972 (54) P= .015	0.2347 (54) P= .044	0.8351 (54) P=0.000	0.3189 (54) P= .009	0.8055 (54) P=0.000	0.4325 (54) P= .001
SCHLPEER	0.2116 (54) P= .052	0.2999 (54) P= .014	0.3264 (54) P= .008	0.2694 (54) P= .024	0.2972 (54) P= .015	1.0000 (54) P=******	0.3950 (54) P= .002	0.3399 (54) P= .006	0.8396 (54) P=0.000	0.4377 (54) P=0.000	0.7851 (54) P=0.000
SCHLADLT	-0.1038 (54) P= .228	0.3310 (54) P= .007	0.1599 (54) P= .124	0.1806 (54) P= .096	0.2347 (54) P= .044	0.3950 (54) P= .002	1.0000 (54) P=******	0.2492 (54) P= .035	0.8307 (54) P=0.000	0.7650 (54) P=0.000	0.3579 (54) P= .004
HOMEFR	0.1691 (54) P= .111	0.0294 (54) P= .417	0.1079 (54) P= .219	0.8320 (54) P=0.000	0.8351 (54) P=0.000	0.3399 (54) P= .006	0.2492 (54) P= .035	1.0000 (54) P=******	0.3534 (54) P= .004	0.7052 (54) P=0.000	0.7431 (54) P=0.000
SCHLFR	0.0669 (54) P= .315	0.3774 (54) P= .002	0.2924 (54) P= .016	0.2701 (54) P= .024	0.3189 (54) P= .009	0.8396 (54) P=0.000	0.8307 (54) P=0.000	0.3534 (54) P= .004	1.0000 (54) P=******	0.7176 (54) P=0.000	0.6874 (54) P=0.000
ADULFR	-0.0178 (54) P= .449	0.2663 (54) P= .026	0.1137 (54) P= .207	0.3683 (54) P= .003	0.8055 (54) P=0.000	0.4377 (54) P=0.000	0.7650 (54) P=0.000	0.7052 (54) P=0.000	0.7176 (54) P=0.000	1.0000 (54) P=******	0.5047 (54) P=0.000
PEERFR	0.2670 (54) P= .025	0.1519 (54) P= .136	0.3000 (54) P= .014	0.8080 (54) P=0.000	0.4325 (54) P= .001	0.7851 (54) P=0.000	0.3579 (54) P= .004	0.7431 (54) P=0.000	0.6874 (54) P=0.000	0.5047 (54) P=0.000	1.0000 (54) P=******

Table 33

Correlations of Stressor Appraisal, Stressor Frequency, and Distress with THIS Support Availability Item Scores and Constructed Scores

Girls

	STRAPST	STRFRST	DISTRES	HOMEPEER	HOMEADLT	SCHLPEER	SCHLADLT	HOMEFR	SCHLFR	ADULFR	PEERFR
STRAPST	1.0000 (36) P=*****	-0.0899 (36) P= .301	-0.0351 (36) P= .419	0.3314 (36) P= .024	0.1157 (36) P= .251	0.1665 (36) P= .166	0.1802 (36) P= .146	0.2996 (36) P= .038	0.2297 (36) P= .089	0.2078 (36) P= .112	0.3362 (36) P= .023
STRFRST	-0.0899 (36) P= .301	1.0000 (36) P=*****	0.6175 (36) P=0.000	-0.0925 (36) P= .296	-0.0502 (36) P= .386	0.1187 (36) P= .245	-0.0022 (36) P= .495	-0.0948 (36) P= .291	0.0772 (36) P= .327	-0.0370 (36) P= .415	0.0094 (36) P= .478
DISTRES	-0.0351 (36) P= .419	0.6175 (36) P=0.000	1.0000 (36) P=*****	0.2336 (36) P= .085	0.2254 (36) P= .093	0.0606 (36) P= .363	0.1699 (36) P= .161	0.3003 (36) P= .038	0.1527 (36) P= .187	0.2780 (36) P= .050	0.2014 (36) P= .119
HOMEPEER	0.3314 (36) P= .024	-0.0925 (36) P= .296	0.2336 (36) P= .085	1.0000 (36) P=*****	0.1680 (36) P= .164	0.1357 (36) P= .215	0.3731 (36) P= .012	0.7916 (36) P=0.000	0.3371 (36) P= .022	0.3796 (36) P= .011	0.7849 (36) P=0.000
HOMEADLT	0.1157 (36) P= .251	-0.0502 (36) P= .386	0.2254 (36) P= .093	0.1680 (36) P= .164	1.0000 (36) P=*****	0.1567 (36) P= .181	0.0125 (36) P= .471	0.7354 (36) P=0.000	0.1122 (36) P= .257	0.7148 (36) P=0.000	0.2157 (35) P= .103
SCHLPEER	0.1665 (36) P= .166	0.1187 (36) P= .245	0.0606 (36) P= .363	0.1357 (36) P= .215	0.1567 (36) P= .181	1.0000 (36) P=*****	0.1392 (36) P= .209	0.1904 (36) P= .133	0.7547 (36) P=0.000	0.2081 (36) P= .112	0.7204 (36) P=0.000
SCHLADLT	0.1802 (36) P= .146	-0.0022 (36) P= .495	0.1699 (36) P= .161	0.3731 (36) P= .012	0.0125 (36) P= .471	0.1392 (36) P= .209	1.0000 (36) P=*****	0.2643 (36) P= .060	0.7547 (36) P=0.000	0.7083 (36) P=0.000	0.3483 (36) P= .019
HOMEFR	0.2996 (36) P= .038	-0.0948 (36) P= .291	0.3003 (36) P= .038	0.7916 (36) P=0.000	0.7354 (36) P=0.000	0.1904 (36) P= .133	0.2643 (36) P= .060	1.0000 (36) P=*****	0.3013 (36) P= .037	0.7040 (36) P=0.000	0.6733 (36) P=0.000
SCHLFR	0.2297 (36) P= .089	0.0772 (36) P= .327	0.1527 (36) P= .187	0.3371 (36) P= .022	0.1122 (36) P= .257	0.7547 (36) P=0.000	0.7547 (36) P=0.000	0.3013 (36) P= .037	1.0000 (36) P=*****	0.6070 (36) P=0.000	0.7080 (36) P=0.000
ADULFR	0.2078 (36) P= .112	-0.0370 (36) P= .415	0.2780 (36) P= .050	0.3796 (36) P= .011	0.7148 (36) P=0.000	0.2081 (36) P= .112	0.7083 (36) P=0.000	0.7040 (36) P=0.000	0.6070 (36) P=0.000	1.0000 (36) P=*****	0.3959 (36) P= .008
PEERFR	0.3362 (36) P= .023	0.0094 (36) P= .478	0.2014 (36) P= .119	0.7849 (36) P=0.000	0.2157 (36) P= .103	0.7204 (36) P=0.000	0.3483 (36) P= .019	0.6733 (36) P=0.000	0.7080 (36) P=0.000	0.3959 (36) P= .008	1.0000 (36) P=*****

Table 34

Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores

All Cohort Students

	COGLCS	SOCLCS	PHYLCS	COGLCF	SOCLCF	PHYLCF	HOMEPEER	HOMEADLT	SCHLPEER	SCHLADLT
COGLCS	1.0000 (53) P=*****	0.5286 (53) P=0.000	0.5554 (53) P=0.000	0.4762 (53) P=0.000	0.1601 (53) P= .126	0.4354 (53) P= .001	-0.2684 (51) P= .028	-0.0152 (51) P= .458	-0.1706 (51) P= .116	-0.2623 (51) P= .032
SOCLCS	0.5286 (53) P=0.000	1.0000 (53) P=*****	0.4288 (53) P= .001	0.5600 (53) P=0.000	0.2697 (53) P= .025	0.2101 (53) P= .065	-0.1627 (51) P= .127	-0.2265 (51) P= .055	-0.2574 (51) P= .034	-0.2349 (51) P= .049
PHYLCS	0.5554 (53) P=0.000	0.4288 (53) P= .001	1.0000 (53) P=*****	0.4577 (53) P=0.000	0.3511 (53) P= .005	0.4284 (53) P= .001	-0.3052 (51) P= .015	0.1147 (51) P= .211	-0.0453 (51) P= .376	-0.1703 (51) P= .116
COGLCF	0.4762 (53) P=0.000	0.5600 (53) P=0.000	0.4577 (53) P=0.000	1.0000 (53) P=*****	0.3379 (53) P= .007	0.4032 (53) P= .001	-0.2289 (51) P= .053	-0.1024 (51) P= .237	-0.0303 (51) P= .416	-0.1418 (51) P= .160
SOCLCF	0.1601 (53) P= .126	0.2697 (53) P= .025	0.3511 (53) P= .005	0.3379 (53) P= .007	1.0000 (53) P=*****	0.4879 (53) P=0.000	0.1824 (51) P= .100	0.1035 (51) P= .235	0.0962 (51) P= .251	0.0561 (51) P= .348
PHYLCF	0.4354 (53) P= .001	0.2101 (53) P= .065	0.4284 (53) P= .001	0.4032 (53) P= .001	0.4879 (53) P=0.000	1.0000 (53) P=*****	0.1119 (51) P= .217	0.2547 (51) P= .036	0.1049 (51) P= .232	0.0424 (51) P= .384
HOMEPEER	-0.2684 (51) P= .024	-0.1627 (51) P= .127	-0.3052 (51) P= .015	-0.2269 (51) P= .053	0.1824 (51) P= .100	0.1119 (51) P= .217	1.0000 (90) P=*****	0.3127 (90) P= .001	0.2369 (90) P= .012	0.2772 (90) P= .004
HOMEADLT	-0.0152 (51) P= .158	-0.2265 (51) P= .055	0.1147 (51) P= .211	-0.1024 (51) P= .237	0.1035 (51) P= .235	0.2547 (51) P= .036	0.3127 (90) P= .001	1.0000 (90) P=*****	0.2561 (90) P= .007	0.1578 (90) P= .069
SCHLPEER	-0.1706 (51) P= .116	-0.2574 (51) P= .034	-0.0453 (51) P= .376	-0.0303 (51) P= .416	0.0962 (51) P= .251	0.1049 (51) P= .232	0.2369 (90) P= .012	0.2561 (90) P= .007	1.0000 (90) P=*****	0.3042 (90) P= .002
SCHLADLT	-0.2623 (51) P= .032	-0.2349 (51) P= .049	-0.1703 (51) P= .116	-0.1418 (51) P= .160	0.0561 (51) P= .348	0.0424 (51) P= .384	0.2772 (90) P= .004	0.1578 (90) P= .069	0.3042 (90) P= .002	1.0000 (90) P=*****

Table 35

Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores

Boys

	COGLCS	SOCLCS	PHYLCS	COGLCF	SOCLCF	PHYLCF	HOMEPEER	HOMEADLT	SCHLPEER	SCHLADLT
COGLCS	1.0000 (27) P=*****	0.6433 (27) P=0.000	0.4876 (27) P= .005	0.5987 (27) P=0.000	0.3583 (27) P= .033	0.3678 (27) P= .030	-0.2983 (27) P= .065	-0.0760 (27) P= .353	-0.1625 (27) P= .209	-0.2928 (27) P= .069
SOCLCS	0.6433 (27) P=0.000	1.0000 (27) P=*****	0.3174 (27) P= .053	0.5856 (27) P= .001	0.3417 (27) P= .041	0.2629 (27) P= .093	-0.3244 (27) P= .049	-0.3042 (27) P= .061	-0.1316 (27) P= .257	-0.2837 (27) P= .076
PHYLCS	0.4876 (27) P= .005	0.3174 (27) P= .053	1.0000 (27) P=*****	0.4110 (27) P= .017	0.3923 (27) P= .021	0.5035 (27) P= .004	-0.1960 (27) P= .164	0.0077 (27) P= .485	0.0350 (27) P= .431	-0.1546 (27) P= .221
COGLCF	0.5987 (27) P=0.000	0.5856 (27) P= .001	0.4110 (27) P= .017	1.0000 (27) P=*****	0.4242 (27) P= .014	0.5396 (27) P= .002	-0.4345 (27) P= .012	-0.2781 (27) P= .080	0.0225 (27) P= .456	-0.1719 (27) P= .196
SOCLCF	0.3583 (27) P= .033	0.3417 (27) P= .041	0.3923 (27) P= .021	0.4242 (27) P= .014	1.0000 (27) P=*****	0.5121 (27) P= .003	0.1407 (27) P= .242	0.0811 (27) P= .344	0.3506 (27) P= .036	0.0506 (27) P= .401
PHYLCF	0.3678 (27) P= .030	0.2629 (27) P= .093	0.5035 (27) P= .004	0.5396 (27) P= .002	0.5121 (27) P= .003	1.0000 (27) P=*****	0.1261 (27) P= .265	0.1622 (27) P= .209	0.3960 (27) P= .020	0.1141 (27) P= .285
HOMEPEER	-0.2983 (27) P= .065	-0.3244 (27) P= .049	-0.1960 (27) P= .164	-0.4345 (27) P= .012	0.1407 (27) P= .242	0.1261 (27) P= .265	1.0000 (54) P=*****	0.3897 (54) P= .002	0.2694 (54) P= .024	0.1806 (54) P= .096
HOMEADLT	-0.0760 (27) P= .353	-0.3042 (27) P= .061	0.0077 (27) P= .485	-0.2781 (27) P= .080	0.0811 (27) P= .344	0.1622 (27) P= .209	0.3897 (54) P= .002	1.0000 (54) P=*****	0.2972 (54) P= .015	0.2347 (54) P= .044
SCHLPEER	-0.1625 (27) P= .209	-0.1316 (27) P= .257	0.0350 (27) P= .431	0.0225 (27) P= .456	0.3506 (27) P= .036	0.3960 (27) P= .020	0.2694 (54) P= .024	0.2972 (54) P= .015	1.0000 (54) P=*****	0.3950 (54) P= .002
SCHLADLT	-0.2928 (27) P= .069	-0.2837 (27) P= .076	-0.1546 (27) P= .221	-0.1719 (27) P= .196	0.0506 (27) P= .401	0.1141 (27) P= .285	0.1806 (54) P= .096	0.2347 (54) P= .044	0.3950 (54) P= .002	1.0000 (54) P=*****

Table 36

Correlations of Connell Locus of Control for Success and Failure Domain Scores with THIS Support Availability Item Scores

Girls

	COGLCS	SOCLCS	PHYLCS	COGLCF	SOCLCF	PHYLCF	HOMEPEER	HOMEADLT	SCHLPEER	SCHLADLT
COGLCS	1.0000 (24) P=******	0.4820 (24) P= .009	0.6398 (24) P=0.000	0.3990 (24) P= .027	-0.0257 (24) P= .453	0.5497 (24) P= .003	-0.2692 (24) P= .102	0.0072 (24) P= .487	-0.1938 (24) P= .182	-0.3141 (24) P= .068
SOCLCS	0.4820 (24) P= .009	1.0000 (24) P=******	0.5641 (24) P= .002	0.5422 (24) P= .003	0.1747 (24) P= .207	0.1677 (24) P= .217	-0.0158 (24) P= .471	-0.1292 (24) P= .274	-0.3866 (24) P= .031	-0.1777 (24) P= .203
PHYLCS	0.6398 (24) P=0.000	0.5641 (24) P= .002	1.0000 (24) P=******	0.5382 (24) P= .003	0.2543 (24) P= .115	0.3803 (24) P= .033	-0.4282 (24) P= .018	0.2587 (24) P= .111	-0.1470 (24) P= .247	-0.2107 (24) P= .161
COGLCF	0.3990 (24) P= .027	0.5422 (24) P= .003	0.5382 (24) P= .003	1.0000 (24) P=******	0.1990 (24) P= .176	0.1952 (24) P= .180	0.0108 (24) P= .480	0.1881 (24) P= .189	-0.1002 (24) P= .321	-0.0851 (24) P= .346
SOCLCF	-0.0257 (24) P= .453	0.1747 (24) P= .207	0.2543 (24) P= .115	0.1990 (24) P= .176	1.0000 (24) P=******	0.5199 (24) P= .005	0.2363 (24) P= .133	0.1435 (24) P= .252	-0.2346 (24) P= .135	0.0754 (24) P= .363
PHYLCF	0.5497 (24) P= .003	0.1677 (24) P= .217	0.3803 (24) P= .033	0.1952 (24) P= .180	0.5199 (24) P= .005	1.0000 (24) P=******	0.0987 (24) P= .323	0.3946 (24) P= .028	-0.2853 (24) P= .088	-0.0501 (24) P= .408
HOMEPEER	-0.2692 (24) P= .102	-0.0158 (24) P= .471	-0.4282 (24) P= .018	0.0108 (24) P= .480	0.2363 (24) P= .133	0.0987 (24) P= .323	1.0000 (36) P=******	0.1680 (36) P= .164	0.1357 (36) P= .215	0.3731 (36) P= .012
HOMEADLT	0.0072 (24) P= .487	-0.1292 (24) P= .274	0.2587 (24) P= .111	0.1881 (24) P= .189	0.1435 (24) P= .252	0.3946 (24) P= .028	0.1680 (36) P= .164	1.0000 (36) P=******	0.1567 (36) P= .181	0.0125 (36) P= .471
SCHLPEER	-0.1938 (24) P= .182	-0.3866 (24) P= .031	-0.1470 (24) P= .247	-0.1002 (24) P= .321	-0.2346 (24) P= .135	-0.2853 (24) P= .088	0.1357 (36) P= .215	0.1567 (36) P= .181	1.0000 (36) P=******	0.1392 (36) P= .209
SCHLADLT	-0.3141 (24) P= .068	-0.1777 (24) P= .203	-0.2107 (24) P= .161	-0.0851 (24) P= .346	0.0754 (24) P= .363	-0.0501 (24) P= .408	0.3731 (36) P= .012	0.0125 (36) P= .471	0.1392 (36) P= .209	1.0000 (36) P=******

Table 37

Means and Standard Deviations of Grade Point Averages for Eighth Grade Marking Periods, and of Reading and Mathematics Test Scores, for Cohort Students

All

Variable	Cases	Mean	Std dev
GPA1P	92	70.8261	8.5093
GPA2P=Midyear 8th	92	69.8587	10.6157
GPA3P	90	71.9056	10.0371
GPA4P=Final 8th	90	72.8861	9.6073
READ67	88	7.9591	1.6611
MATH67	86	7.0198	1.7877

Boys

Variable	Cases	Mean	Std dev
GPA1P	54	67.9444	8.4662
GPA2P	54	67.0556	10.4148
GPA3P	52	69.2885	10.0147
GPA4P	52	70.5721	9.2719
READ67	51	8.1196	1.6840
MATH67	50	6.9630	1.6104

Girls

Variable	Cases	Mean	Std dev
GPA1P	38	74.9211	6.7878
GPA2P	38	73.8421	9.6968
GPA3P	38	75.4868	9.0157
GPA4P	38	76.0526	9.2572
READ67	37	7.7378	1.6258
MATH67	36	7.0986	2.0297

Table 38

Percentage of Students Receiving Zero to Four Passing Grades in Four Major Subjects at Eighth Grade Midyear and Final

	GPA2P			GPA4P		
All						
Pass	f	Rel %	Cum %	f	Rel %	Cum %
0	7	7.6	7.6	7	7.6	7.8
1	6	6.5	14.1	2	2.2	10.0
2	14	15.2	29.3	4	4.3	14.4
3	16	17.4	46.7	14	15.2	30.0
4	49	53.3	100.0	63	68.5	100.0
Missing				2	2.2	
Total	92	100.		92	100.	
Boys						
0	6	11.1	11.1	5	9.3	9.6
1	4	7.4	18.5	1	1.9	11.5
2	13	24.1	42.6	3	5.6	17.3
3	10	18.5	61.1	11	20.4	38.5
4	21	38.9	100.0	32	59.3	100.0
Missing				2	3.7	
Total	54	100.0		54	100.0	
Girls						
0	1	2.6	2.6	2	5.3	5.3
1	2	5.3	7.9	1	2.6	7.9
2	1	2.6	10.5	1	2.6	10.5
3	6	15.8	26.3	3	7.9	18.4
4	28	73.7	100.0	31	81.6	100.0
Missing						
Total	38	100.0		38	100.0	

Table 39

Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for All Cohort Students

	GPA1P	GPA2P	READ67	MATH67
GPA1P	1.0000 (92) P=*****	0.8207 (92) P=0.000	0.3818 (88) P=0.000	0.6373 (86) P=0.000
GPA2P	0.8207 (92) P=0.000	1.0000 (92) P=*****	0.3690 (88) P=0.000	0.6315 (86) P=0.000
READ67	0.3818 (88) P=0.000	0.3690 (88) P=0.000	1.0000 (88) P=*****	0.4500 (86) P=0.000
MATH67	0.6373 (86) P=0.000	0.6315 (86) P=0.000	0.4500 (86) P=0.000	1.0000 (86) P=*****
STRAP5T	0.3625 (90) P=0.000	0.2541 (90) P= .008	0.0826 (86) P= .225	0.1448 (84) P= .094
STREF5T	-0.2776 (90) P= .004	-0.2784 (90) P= .004	-0.1121 (86) P= .152	-0.2708 (84) P= .006
STRA5D1	0.4356 (90) P=0.000	0.3253 (90) P= .001	0.1203 (86) P= .135	0.1921 (84) P= .040
STRA5D2	0.3078 (90) P= .002	0.1877 (90) P= .038	0.1167 (86) P= .142	0.1549 (84) P= .080
STRA5D3	0.1695 (90) P= .037	0.1335 (90) P= .105	-0.1314 (86) P= .114	0.0375 (84) P= .367
STFR5D1	-0.5038 (90) P=0.000	-0.5191 (90) P=0.000	-0.1808 (86) P= .048	-0.3544 (84) P=0.000
STFR5DZ	-0.4714 (90) P=0.000	-0.4642 (90) P=0.000	-0.2601 (86) P= .008	-0.3169 (84) P= .002
STFR5D2	-0.1906 (90) P= .036	-0.1792 (90) P= .046	-0.1472 (86) P= .088	-0.2424 (84) P= .013
STFR5D3	0.1564 (90) P= .068	0.1425 (90) P= .090	0.1325 (86) P= .112	0.1368 (84) P= .107

Table 39 cont'd

	GPA1P	GPA2P	READ67	MATH67
SUPAP5T	0.0675 (90) P= .264	0.0366 (90) P= .366	-0.0510 (86) P= .321	-0.0017 (84) P= .494
SUPPF5T	0.1276 (90) P= .115	0.1244 (90) P= .121	-0.0653 (86) P= .275	-0.0280 (84) P= .400
SUPA5D1	0.1195 (90) P= .131	0.0426 (90) P= .345	0.0157 (86) P= .443	0.0504 (84) P= .324
SUPA5D2	0.1405 (90) P= .093	0.0833 (90) P= .217	0.0127 (86) P= .454	0.0135 (84) P= .451
SUPA5D3	-0.0749 (90) P= .241	-0.0726 (90) P= .248	-0.1936 (86) P= .037	-0.2014 (84) P= .033
SUFR5D1	0.1239 (90) P= .122	0.1269 (90) P= .117	-0.0435 (86) P= .346	-0.0392 (84) P= .361
SUFR5DZ	0.1124 (89) P= .147	0.1073 (89) P= .158	-0.0435 (86) P= .346	-0.0392 (84) P= .361
SUFR5D2	0.0478 (90) P= .327	0.0115 (90) P= .457	-0.1004 (86) P= .179	-0.0750 (84) P= .249
SUFR5D3	-0.0283 (90) P= .395	-0.0315 (90) P= .384	-0.0410 (86) P= .354	-0.0980 (84) P= .188
SUFR5D4	0.1513 (90) P= .077	0.0479 (90) P= .327	0.1106 (86) P= .155	0.0084 (84) P= .470

Table 40

Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for Cohort Boys

	GPA1P	GPA2P	READ67	MATH67
GPA1P	1.0000 (54) P=*****	0.7723 (54) P=0.000	0.3912 (51) P= .002	0.6615 (50) P=0.000
GPA2P	0.7723 (54) P=0.000	1.0000 (54) P=*****	0.3508 (51) P= .006	0.6143 (50) P=0.000
READ67	0.3912 (51) P= .002	0.3508 (51) P= .006	1.0000 (51) P=*****	0.3010 (50) P= .017
MATH67	0.6615 (50) P=0.000	0.6143 (50) P=0.000	0.3010 (50) P= .017	1.0000 (50) P=*****
STRAP5T	0.3233 (53) P= .009	0.2476 (53) P= .037	0.2894 (50) P= .021	0.2139 (49) P= .070
STREF5T	-0.2974 (53) P= .015	-0.3068 (53) P= .013	-0.0507 (50) P= .363	-0.2495 (49) P= .042
STRA5D1	0.3836 (53) P= .002	0.2921 (53) P= .017	0.3271 (50) P= .010	0.2499 (49) P= .042
STRA5D2	0.2506 (53) P= .035	0.1370 (53) P= .164	0.2731 (50) P= .027	0.1547 (49) P= .144
STRA5D3	0.1456 (53) P= .149	0.1489 (53) P= .144	0.0036 (50) P= .490	0.1783 (49) P= .110
STFR5D1	-0.4820 (53) P=0.000	-0.5161 (53) P=0.000	-0.0804 (50) P= .290	-0.2581 (49) P= .037
STFR5DZ	-0.4454 (53) P=0.000	-0.4345 (53) P= .001	-0.2107 (50) P= .071	-0.1667 (49) P= .126
STFR5D2	-0.3523 (53) P= .005	-0.3738 (53) P= .003	-0.2446 (50) P= .043	-0.3867 (49) P= .003
STFR5D3	0.0686 (53) P= .313	0.0524 (53) P= .355	0.1335 (50) P= .178	0.0602 (49) P= .341

Table 40 cont'd

	GPA1P	GPA2P	READ67	MATH67
SUPAP5T	-0.0649 (53) P= .322	-0.0667 (53) P= .318	-0.0936 (50) P= .259	-0.1386 (49) P= .171
SUPPF5T	0.1400 (53) P= .159	0.1207 (53) P= .195	0.0233 (50) P= .436	0.1596 (49) P= .137
SUPA5D1	-0.0690 (53) P= .312	-0.1130 (53) P= .210	-0.0390 (50) P= .394	-0.1222 (49) P= .201
SUPA5D2	-0.0320 (53) P= .410	-0.0818 (53) P= .280	-0.0042 (50) P= .488	-0.1889 (49) P= .097
SUPA5D3	-0.2444 (53) P= .039	-0.2127 (53) P= .063	-0.1362 (50) P= .173	-0.3484 (49) P= .007
SUFR5D1	0.1217 (53) P= .193	0.1245 (53) P= .167	0.0949 (50) P= .256	0.1475 (49) P= .156
SUFR5DZ	0.1217 (53) P= .193	0.1245 (53) P= .187	0.0949 (50) P= .256	0.1475 (49) P= .156
SUFR5D2	-0.0603 (53) P= .334	-0.1003 (53) P= .237	-0.0607 (50) P= .338	-0.0464 (49) P= .376
SUFR5D3	-0.0869 (53) P= .268	-0.0662 (53) P= .319	0.1025 (50) P= .239	0.0238 (49) P= .435
SUFR5D4	-0.0423 (53) P= .362	-0.1571 (53) P= .131	0.1555 (50) P= .140	-0.1559 (49) P= .142

Table 41

Correlations of THIS Whole Scores and Dimension Scores with GPA, Reading, and Mathematics for Cohort Girls

	GPA1P	GPA2P	READ67	MATH67
GPA1P	1.0000 (38) P=*****	0.8547 (38) P=0.000	0.6398 (37) P=0.000	0.7531 (36) P=0.000
GPA2P	0.8547 (38) P=0.000	1.0000 (38) P=*****	0.5961 (37) P=0.000	0.7682 (36) P=0.000
READ67	0.6398 (37) P=0.000	0.5961 (37) P=0.000	1.0000 (37) P=*****	0.6429 (36) P=0.000
MATH67	0.7531 (36) P=0.000	0.7682 (36) P=0.000	0.6429 (36) P=0.000	1.0000 (36) P=*****
STRAP5T	0.0984 (37) P= .281	-0.0016 (37) P= .496	-0.0802 (36) P= .321	0.0399 (35) P= .410
STREF5T	-0.1710 (37) P= .156	-0.1744 (37) P= .151	-0.2309 (36) P= .088	-0.2883 (35) P= .047
STRA5D1	0.2169 (37) P= .099	0.1251 (37) P= .230	-0.0482 (36) P= .390	0.1069 (35) P= .271
STRA5D2	0.1225 (37) P= .235	0.0314 (37) P= .427	0.0109 (36) P= .475	0.1335 (35) P= .222
STRA5D3	-0.0389 (37) P= .410	-0.1559 (37) P= .178	-0.3477 (36) P= .019	-0.2472 (35) P= .076
STFR5D1	-0.4527 (37) P= .002	-0.4476 (37) P= .003	-0.3842 (36) P= .010	-0.4537 (35) P= .003
STFR5DZ	-0.4430 (37) P= .003	-0.4422 (37) P= .003	-0.4001 (36) P= .008	-0.4975 (35) P= .001
STFR5D2	0.0852 (37) P= .308	0.1121 (37) P= .254	-0.0283 (36) P= .435	-0.0877 (35) P= .308
STFR5D3	0.3652 (37) P= .013	0.3009 (37) P= .035	0.1413 (36) P= .205	0.2286 (35) P= .093

Table 41 cont 'd

	GPA1P	GPA2P	READ67	MATH67
SUPAP5T	0.0540 (37) P= .375	0.0168 (37) P= .461	0.0741 (36) P= .334	0.1313 (35) P= .226
SUPPF5T	-0.0402 (37) P= .407	0.0236 (37) P= .445	-0.1428 (36) P= .203	-0.2451 (35) P= .078
SUPA5D1	0.1501 (37) P= .188	0.0521 (37) P= .380	0.1851 (36) P= .140	0.2199 (35) P= .102
SUPA5D2	0.2142 (37) P= .101	0.1675 (37) P= .161	0.1100 (36) P= .262	0.2274 (35) P= .094
SUPA5D3	-0.0672 (37) P= .346	-0.0539 (37) P= .376	-0.2410 (36) P= .078	-0.0557 (35) P= .375
SUFR5D1	-0.0790 (37) P= .321	-0.0136 (37) P= .468	-0.1883 (36) P= .136	-0.2747 (35) P= .055
SUFR5DZ	-0.1661 (36) P= .166	-0.1328 (36) P= .220	-0.1883 (36) P= .136	-0.2747 (35) P= .055
SUFR5D2	-0.0545 (37) P= .374	-0.0252 (37) P= .441	-0.0954 (36) P= .290	-0.1529 (35) P= .190
SUFR5D3	-0.0726 (37) P= .335	-0.0798 (37) P= .319	-0.2136 (36) P= .105	-0.2598 (35) P= .066
SUFR5D4	0.2943 (37) P= .039	0.2075 (37) P= .109	0.1115 (36) P= .259	0.1921 (35) P= .135

Table 42

Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, All Cohort Students

```
              MEAN    STD DEV   LABEL

GPA2P       70.744    10.102
READ67       7.962     1.680
STRAP8       3.667     0.405 Stressor Appraisal items identical with AEI Stressor Reaction
STRFR8       1.648     0.320    "     Frequency   "         "        "   "    "      Frequency
SUPAP8       4.083     0.413 Support  Appraisal   "         "        "   "  Support  Reaction
SUPFR8       1.920     0.359    "     Frequency   "         "        "   "    "      Frequency
STREX8       6.023     1.229 Interaction of Stressor Appraisal and Stressor Frequency
SUPRD8      32.488     7.561 Interaction of Support Appraisal and Reading

N OF CASES =        86

CORRELATION

               GPA2P     READ67     STRAP8     STRFR8     SUPAP8     SUPFR8     STREX8     SUPRD8

GPA2P          1.000      0.373      0.279     -0.249     -0.000      0.010     -0.069      0.344
READ67         0.373      1.000      0.099     -0.161     -0.031     -0.069     -0.083      0.897
STRAP8         0.279      0.099      1.000     -0.164      0.532      0.128      0.413      0.321
STRFR8        -0.249     -0.161     -0.164      1.000      0.072      0.232      0.824     -0.110
SUPAP8        -0.000     -0.031      0.532      0.072      1.000      0.312      0.352      0.405
SUPFR8         0.010     -0.069      0.128      0.232      0.312      1.000      0.274      0.079
STREX8        -0.069     -0.083      0.413      0.824      0.352      0.274      1.000      0.082
SUPRD8         0.344      0.897      0.321     -0.110      0.405      0.079      0.082      1.000
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Table 43

Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, Cohort Boys

```
                MEAN   STD DEV   LABEL

GPA2P         67.880    10.297
READ67         8.123     1.701
STRAP8         3.538     0.372
STRFR8         1.670     0.318
SUPAP8         3.999     0.401
SUPFR8         1.845     0.359
STREX8         5.893     1.202
SUPRD8        32.461     7.532

N OF CASES =        50

CORRELATION

                GPA2P     READ67     STRAP8     STRFR8     SUPAP8     SUPFR8     STREX8     SUPRD8

GPA2P           1.000      0.352      0.252     -0.220     -0.204     -0.040     -0.046      0.240
READ67          0.352      1.000      0.283     -0.094     -0.030     -0.009      0.081      0.900
STRAP8          0.252      0.283      1.000     -0.123      0.428      0.149      0.447      0.457
STRFR8         -0.220     -0.094     -0.123      1.000      0.227      0.264      0.827      0.010
SUPAP8         -0.204     -0.030      0.428      0.227      1.000      0.363      0.421      0.404
SUPFR8         -0.040     -0.009      0.149      0.264      0.363      1.000      0.296      0.156
STREX8         -0.046      0.081      0.447      0.827      0.421      0.296      1.000      0.261
SUPRD8          0.240      0.900      0.457      0.010      0.404      0.156      0.261      1.000
```

Table 44

Means, Standard Deviations, and Correlations of Variables for Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading, Cohort Girls

```
             MEAN    STD DEV   LABEL

GPA2P       74.722     8.450
READ67       7.739     1.649
STRAP8       3.847     0.382
STRFR8       1.618     0.324
SUPAP8       4.200     0.406
SUPFR8       2.024     0.337
STREX8       6.204     1.259
SUPRD8      32.525     7.708

N OF CASES =        36

CORRELATION

               GPA2P     READ67     STRAP8     STRFR8     SUPAP8     SUPFR8     STREX8     SUPRD8

GPA2P          1.000      0.596      0.045     -0.267      0.104     -0.153     -0.241      0.575
READ67         0.596      1.000     -0.025     -0.283      0.033     -0.094     -0.278      0.910
STRAP8         0.045     -0.025      1.000     -0.175      0.575     -0.124      0.335      0.196
STRFR8        -0.267     -0.283     -0.175      1.000     -0.087      0.255      0.865     -0.273
SUPAP8         0.104      0.033      0.575     -0.087      1.000      0.129      0.220      0.434
SUPFR8        -0.153     -0.094     -0.124      0.255      0.129      1.000      0.171     -0.030
STREX8        -0.241     -0.278      0.335      0.865      0.220      0.171      1.000     -0.152
SUPRD8         0.575      0.910      0.196     -0.273      0.434     -0.030     -0.152      1.000
```

Table 45

Results of Replication of 1985 Analysis of Regression of GPA on AEI Scores and Reading

All

Step	Multr	Rsq	AdjRsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.3728	0.1390	0.1288	13.563	0.000	0.1390	13.563	0.000	IN:	READ67	0.3728	0.3728
2	0.4449	0.1980	0.1736	10.243	0.000	0.0589	6.099	.016	IN:	STRAP8	0.2440	0.2786
3	0.4717	0.2225	0.1941	7.823	0.000	0.0246	2.590	.111	IN:	STRFR8	-0.1606	-0.2491
4	0.4836	0.2353	0.1780	6.248	0.000	0.0133	1.407	.239	IN:	SUPAP8	-0.1390	-0.0001
5	0.4914	0.2414	0.1940	5.093	0.000	0.0057	0.597	.442	IN:	SUPFR8	0.0812	0.0103
6	0.4916	0.2417	0.1841	4.196	.001	0.0002	0.025	.875	IN:	STREX8	-0.1435	-0.0690
7	0.4947	0.2448	0.1770	3.611	.002	0.0031	0.319	.574	IN:	SUPRD8	0.6645	0.3437

Boys

Step	Multr	Rsq	AdjRsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.3521	0.1240	0.1057	6.794	.012	0.1240	6.794	.012	IN:	READ67	0.3521	0.3521
2	0.3863	0.1492	0.1130	4.122	.022	0.0252	1.394	.244	IN:	STRAP8	0.1656	0.2521
3	0.4233	0.1792	0.1256	3.347	.027	0.0300	1.679	.202	IN:	STRFR8	-0.1747	-0.2204
4	0.4959	0.2459	0.1789	3.668	.011	0.0667	3.981	.052	IN:	SUPAP8	-0.3049	-0.2041
5	0.4992	0.2492	0.1639	2.920	.023	0.0033	0.192	.663	IN:	SUPFR8	0.0628	-0.0397
6	0.5013	0.2513	0.1469	2.406	.043	0.0022	0.124	.727	IN:	STREX8	0.4788	-0.0455
7	0.5019	0.2519	0.1272	2.020	.075	0.0006	0.033	.857	IN:	SUPRD8	0.3360	0.2400

Girls

Step	Multr	Rsq	AdjRsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.5963	0.3556	0.3366	18.759	0.000	0.3556	18.759	0.000	IN:	READ67	0.5963	0.5963
2	0.5993	0.3592	0.3204	9.249	.001	0.0036	0.187	.668	IN:	STRAP8	0.0603	0.0451
3	0.6065	0.3678	0.3085	6.205	.002	0.0086	0.435	.514	IN:	STRFR8	-0.0985	-0.2670
4	0.6098	0.3719	0.2909	4.539	.005	0.0041	0.203	.656	IN:	SUPAP8	0.0735	0.1039
5	0.6165	0.3800	0.2767	3.678	.010	0.0081	0.394	.535	IN:	SUPFR8	-0.0968	-0.1526
6	0.6317	0.3990	0.2747	3.209	.015	0.0190	0.917	.346	IN:	STREX8	-1.5713	-0.2407
7	0.6323	0.3998	0.2497	2.664	.030	0.0007	0.034	.856	IN:	SUPRD8	-0.3081	0.5748

Table 46

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, All Cohort Students

```
              MEAN   STD DEV   LABEL

GPA2P       70.744    10.102
READ67       7.962     1.680
STRA8PR      3.736     0.451   Stressor Appraisal Predictor Dimension (STRA8D1+STRA8D2)
STRF8PR      1.431     0.350      "     Frequency     "         "     (STRF8D1+STRF8DZ)
SUPA8PR      4.131     0.442   Support  Appraisal     "         "     (SUPA8D1)
SUPF8PR      2.070     0.504      "     Frequency     "         "     (SUPF8D4)
STRARDP     29.846     7.576   Interaction of STRA8PR with READ67

N OF CASES =       86

CORRELATION

              GPA2P     READ67    STRA8PR    STRF8PR    SUPA8PR    SUPF8PR    STRARDP

GPA2P         1.000      0.373      0.280     -0.382      0.041     -0.080      0.433
READ67        0.373      1.000      0.128     -0.246      0.016      0.111      0.880
STRA8PR       0.280      0.128      1.000     -0.209      0.548      0.331      0.571
STRF8PR      -0.382     -0.246     -0.209      1.000     -0.016      0.088     -0.285
SUPA8PR       0.041      0.016      0.548     -0.016      1.000      0.423      0.278
SUPF8PR      -0.080      0.111      0.331      0.088      0.423      1.000      0.254
STRARDP       0.433      0.880      0.571     -0.285      0.278      0.254      1.000
```

Table 47

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, Cohort Boys

```
               MEAN    STD DEV    LABEL

GPA2P        67.880     10.277
READ67        8.123      1.701
STRA8PR       3.584      0.424
STRF8PR       1.467      0.351
SUPA8PR       4.023      0.431
SUPF8PR       1.981      0.515
STRARDP      29.348      8.149

N OF CASES =          50

CORRELATION

               GPA2P       READ67      STRA8PR     STRF8PR     SUPA8PR     SUPF8PR     STRARDP

GPA2P          1.000        0.352       0.233      -0.442      -0.164      -0.284       0.377
READ67         0.352        1.000       0.329      -0.248      -0.039       0.156       0.908
STRA8PR        0.233        0.329       1.000      -0.251       0.474       0.218       0.684
STRF8PR       -0.442       -0.268      -0.251       1.000       0.188       0.141      -0.289
SUPA8PR       -0.164       -0.039       0.474       0.188       1.000       0.374       0.193
SUPF8PR       -0.284        0.156       0.218       0.141       0.374       1.000       0.214
STRARDP        0.377        0.908       0.684      -0.289       0.193       0.214       1.000
```

Table 48

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Reading, Cohort Girls

```
                  MEAN    STD DEV    LABEL

GPA2P           74.722      8.450
READ67           7.739      1.649
STRA8PR          3.948      0.405
STRF8PR          1.382      0.346
SUPA8PR          4.281      0.418
SUPF8PR          2.194      0.468
STRARDP         30.539      6.751

N OF CASES =          36

CORRELATION

                 GPA2P      READ67     STRA8PR     STRF8PR     SUPA8PR     SUPF8PR     STRARDP

GPA2P            1.000       0.596       0.055      -0.237       0.116       0.063       0.547
READ67           0.596       1.000      -0.019      -0.257       0.185       0.112       0.885
STRA8PR          0.055      -0.019       1.000      -0.066       0.521       0.369       0.429
STRF8PR         -0.237      -0.257      -0.066       1.000      -0.226       0.078      -0.263
SUPA8PR          0.116       0.185       0.521      -0.226       1.000       0.408       0.401
SUPF8PR          0.063       0.112       0.369       0.078       0.408       1.000       0.302
STRARDP          0.547       0.885       0.429      -0.263       0.401       0.302       1.000
```

Table 49

Results of Regression of Grade Point Average on THIS Predictor Subscales and Reading

All

```
Step   Multr      Rsq    Adjrsq      F(equ)   Sigf     Rsqch        Fch  Sigch          Variable    Betain    Correl
   1  0.4327   0.1872    0.1775      19.346  0.000    0.1872     19.346  0.000   IN:    STRARDP     0.4327    0.4327
   2  0.5102   0.2603    0.2425      14.606  0.000    0.0731      8.207   .005   IN:    STRF8PR    -0.2821   -0.3824
```

Boys

```
Step   Multr      Rsq    Adjrsq      F(equ)   Sigf     Rsqch        Fch  Sigch          Variable    Betain    Correl
   1  0.4424   0.1957    0.1789      11.679   .001    0.1957     11.679   .001   IN:    STRF8PR    -0.4424   -0.4424
   2  0.5135   0.2636    0.2323       8.414   .001    0.0679      4.337   .043   IN:    STRARDP     0.2722    0.3772
   3  0.5973   0.3567    0.3148       8.502  0.000    0.0931      6.655   .013   IN:    SUPF8PR    -0.3199   -0.2041
```

Girls

```
Step   Multr      Rsq    Adjrsq      F(equ)   Sigf     Rsqch        Fch  Sigch          Variable    Betain    Correl
   1  0.5963   0.3556    0.3366      18.759  0.000    0.3556     18.759  0.000   IN:    READ67      0.5963    0.5963
```

Table 50

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, All Cohort Students

```
              MEAN    STD DEV   LABEL

GPA2P       71.048    10.014
MATH67       7.057     1.783
STRA8PR      3.737     0.456
STRF8PR      1.432     0.354
SUPA8PR      4.126     0.447
SUPF8PR      2.064     0.506
STRAMTP     26.521     7.876   Interaction of STRA8PR with MATH67

N OF CASES =        84

CORRELATION

              GPA2P     MATH67    STRA8PR    STRF8PR    SUPA8PR    SUPF8PR    STRAMTP

GPA2P         1.000      0.647      0.284     -0.395      0.056     -0.070      0.656
MATH67        0.647      1.000      0.188     -0.335      0.050      0.008      0.915
STRA8PR       0.284      0.188      1.000     -0.210      0.550      0.331      0.557
STRF8PR      -0.395     -0.335     -0.210      1.000     -0.014      0.088     -0.356
SUPA8PR       0.056      0.050      0.550     -0.014      1.000      0.422      0.271
SUPF8PR      -0.070      0.008      0.331      0.088      0.422      1.000      0.157
STRAMTP       0.656      0.915      0.557     -0.356      0.271      0.157      1.000
```

Table 51

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, Cohort Boys

```
              MEAN    STD DEV    LABEL

GPA2P       63.143     10.233
MATH67       6.970      1.626
STRA8PR      3.583      0.428
STRF8PR      1.469      0.355
SUPA8PR      4.017      0.433
SUPF8PR      1.980      0.520
STRAMTP     25.130      7.113

N OF CASES =        49

CORRELATION

               GPA2P      MATH67     STRA8PR     STRF8PR     SUPA8PR     SUPF8PR     STRAMTP

GPA2P          1.000       0.616       0.239      -0.459      -0.149      -0.288       0.611
MATH67         0.616       1.000       0.222      -0.318      -0.122      -0.156       0.915
STRA8PR        0.239       0.222       1.000      -0.251       0.475       0.218       0.591
STRF8PR       -0.459      -0.318      -0.251       1.000       0.195       0.142      -0.349
SUPA8PR       -0.149      -0.122       0.475       0.195       1.000       0.375       0.111
SUPF8PR       -0.288      -0.156       0.218       0.142       0.375       1.000      -0.044
STRAMTP        0.611       0.915       0.591      -0.349       0.111      -0.044       1.000
```

Table 52

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales and Mathematics, Cohort Girls

```
                 MEAN   STD DEV   LABEL

GPA2P          75.114     8.235
MATH67          7.179     2.001
STRA8PR         3.951     0.410
STRF8PR         1.381     0.351
SUPA8PR         4.279     0.424
SUPF8PR         2.181     0.467
STRAMTP        28.468     8.561

N OF CASES =         35

CORRELATION

                  GPA2P     MATH67    STRA8PR    STRF8PR    SUPA8PR    SUPF8PR    STRAMTP

GPA2P             1.000      0.781      0.043     -0.241      0.127      0.118      0.703
MATH67            0.781      1.000      0.132     -0.350      0.220      0.192      0.935
STRA8PR           0.043      0.132      1.000     -0.065      0.523      0.383      0.458
STRF8PR          -0.241     -0.350     -0.065      1.000     -0.226      0.075     -0.333
SUPA8PR           0.127      0.220      0.523     -0.226      1.000      0.411      0.363
SUPF8PR           0.118      0.192      0.383      0.075      0.411      1.000      0.337
STRAMTP           0.703      0.935      0.458     -0.333      0.363      0.337      1.000
```

Table 53

Results of Regression of Grade Point Average on THIS Predictor Subscales and Mathematics

All

```
Step   Multr     Rsq  AdjRsq   F(Eqn)  SigF   RsqCh     FCh  SigCh       Variable   BetaIn  Correl
   1  0.6564  0.4309  0.4240   62.093  .000  0.4309  62.093   .000  IN:  STRAMTP    0.6564  0.6564
   2  0.6795  0.4617  0.4484   34.732  .000  0.0307   4.626   .034  IN:  SUPFBPR   -0.1775 -0.0703
```

Boys

```
Step   Multr     Rsq  AdjRsq   F(Eqn)  SigF   RsqCh     FCh  SigCh       Variable   BetaIn  Correl
   1  0.6162  0.3797  0.3665   28.764 0.000  0.3797  28.764  0.000  IN:  MATH67     0.6162  0.6162
   2  0.6757  0.4568  0.4332   19.344 0.000  0.0772   6.536   .014  IN:  STRFBPR   -0.2930 -0.4591
```

Girls

```
Step   Multr     Rsq  AdjRsq   F(Eqn)  SigF   RsqCh     FCh  SigCh       Variable   BetaIn  Correl
   1  0.7808  0.6097  0.5978   51.544 0.000  0.6097  51.544  0.000  IN:  MATH67     0.7808  0.7808
```

Table 54

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, All

```
             MEAN   STD DEV   LABEL

GPA2P      71.338     9.669
READ67      7.991     1.629
STRA8PR     3.716     0.457
STRF8PR     1.421     0.358
SUPA8PR     4.103     0.447

SUPF8PR     2.054     0.512
STRARDP    29.742     7.145
NSXS85     14.014     4.276

N OF CASES =        74

CORRELATION

              GPA2P    READ67   STRA8PR   STRF8PR   SUPA8PR   SUPF8PR   STRARDP    NSXS85

GPA2P         1.000     0.364     0.303    -0.452     0.088    -0.113     0.453    -0.325
READ67        0.364     1.000     0.063    -0.274    -0.031     0.069     0.863    -0.244
STRA8PR       0.303     0.063     1.000    -0.277     0.537     0.263     0.546    -0.012
STRF8PR      -0.452    -0.274    -0.277     1.000    -0.058     0.075    -0.346     0.421
SUPA8PR       0.088    -0.031     0.537    -0.058     1.000     0.393     0.250     0.002
SUPF8PR      -0.113     0.069     0.263     0.075     0.393     1.000     0.196    -0.009
STRARDP       0.453     0.863     0.546    -0.346     0.250     0.196     1.000    -0.207
NSXS85       -0.325    -0.244    -0.012     0.421     0.002    -0.009    -0.207     1.000
```

Table 55

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, Boys

```
              MEAN    STD DEV    LABEL

GPA2P       68.575      9.798
READ67       8.225      1.565
STRA8PR      3.531      0.417
STRF8PR      1.476      0.373
SUPA8PR      3.968      0.426
SUPF8PR      1.943      0.522
STRARDP     29.224      7.395
NSXS85      13.950      3.651

N OF CASES =        40

CORRELATION

                GPA2P      READ67     STRA8PR     STRF8PR     SUPA8PR     SUPF8PR     STRARDP      NSXS85

GPA2P           1.000       0.294       0.320      -0.502      -0.103      -0.359       0.378      -0.273
READ67          0.294       1.000       0.290      -0.340      -0.123       0.095       0.894      -0.124
STRA8PR         0.320       0.290       1.000      -0.288       0.421       0.058       0.677      -0.164
STRF8PR        -0.502      -0.340      -0.288       1.000       0.231       0.185      -0.357       0.331
SUPA8PR        -0.103      -0.123       0.421       0.231       1.000       0.300       0.118       0.213
SUPF8PR        -0.359       0.095       0.058       0.185       0.300       1.000       0.094       0.215
STRARDP         0.378       0.894       0.677      -0.357       0.118       0.094       1.000      -0.147
NSXS85         -0.273      -0.124      -0.164       0.331       0.213       0.215      -0.147       1.000
```

Table 56

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control, Girls

```
              MEAN    STD DEV    LABEL

GPA2P       74.588      8.557
READ67       7.715      1.682
STRA8PR      3.935      0.407
STRF8PR      1.357      0.334
SUPA8PR      4.263      0.423
SUPF8PR      2.186      0.473
STRARDP     30.352      6.900
NSXS85      14.088      4.969

N OF CASES =        34


CORRELATION

                GPA2P      READ67     STRA8PR     STRF8PR     SUPA8PR     SUPF8PR     STRARDP      NSXS85

GPA2P           1.000       0.630       0.017      -0.313       0.100       0.030       0.560      -0.440
READ67          0.630       1.000      -0.006      -0.274       0.185       0.132       0.888      -0.345
STRA8PR         0.017      -0.006       1.000      -0.151       0.510       0.343       0.435       0.106
STRF8PR        -0.313      -0.274      -0.151       1.000      -0.315       0.026      -0.314       0.545
SUPA8PR         0.100       0.185       0.510      -0.315       1.000       0.400       0.392      -0.192
SUPF8PR         0.030       0.132       0.343       0.026       0.400       1.000       0.308      -0.233
STRARDP         0.560       0.888       0.435      -0.314       0.392       0.308       1.000      -0.273
NSXS85         -0.440      -0.345       0.106       0.545      -0.192      -0.233      -0.273       1.000
```

Table 57

Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading, and Nowicki-Strickland Locus of Control

All

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.4531	0.2053	0.1942	18.597	0.000	0.2053	18.597	0.000	IN:	STRARDP	0.4531	0.4531
2	0.5517	0.3043	0.2847	15.529	0.000	0.0990	10.109	.002	IN:	STRF8PR	-0.3355	-0.4522

Boys

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.5021	0.2521	0.2324	12.809	.001	0.2521	12.809	.001	IN:	STRF8PR	-0.5021	-0.5021
2	0.5704	0.3254	0.2889	8.923	.001	0.0733	4.020	.052	IN:	SUPF8PR	-0.2755	-0.3589
3	0.6286	0.3951	0.3447	7.839	0.000	0.0697	4.151	.049	IN:	STRARDP	0.2871	0.3782

Girls

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.6296	0.3964	0.3775	21.012	0.000	0.3964	21.012	0.000	IN:	READ67	0.6296	0.6296
2	0.6727	0.4525	0.4172	12.811	0.000	0.0561	3.179	.084	IN:	NSXS85	-0.2524	-0.4396

Table 5.8

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with Low Externality

<u>N-S Externality LE 14</u>

```
              MEAN    STD DEV    LABEL                     MEAN    STD DEV    LABEL

GPA2P       73.525     10.031                GPA2P       73.525     10.031
READ67       8.206      1.632                MATH67       7.539      2.177
STRA8PR      3.678      0.399                STRA8PR      3.678      0.399
STRF8PR      1.332      0.290                STRF8PR      1.332      0.290
SUPA8PR      4.068      0.476                SUPA8PR      4.068      0.476
SUPF8PR      2.034      0.543                SUPF8PR      2.034      0.543
NSXS85      10.700      2.301                NSXS85      10.700      2.301

N OF CASES =          40                     N OF CASES =          40

CORRELATION

              GPA2P     READ67    STRA8PR    STRF8PR    SUPA8PR    SUPF8PR     NSXS85

GPA2P         1.000      0.372      0.199     -0.475      0.130     -0.044     -0.427
READ67        0.372      1.000      0.119     -0.198      0.053      0.076     -0.299
STRA8PR       0.199      0.119      1.000     -0.296      0.591      0.508     -0.268
STRF8PR      -0.475     -0.198     -0.296      1.000     -0.066     -0.212      0.210
SUPA8PR       0.130      0.053      0.591     -0.066      1.000      0.561     -0.159
SUPF8PR      -0.044      0.076      0.508     -0.212      0.561      1.000     -0.176
NSXS85       -0.427     -0.299     -0.268      0.210     -0.159     -0.176      1.000

CORRELATION

              GPA2P     MATH67    STRA8PR    STRF8PR    SUPA8PR    SUPF8PR     NSXS85

GPA2P         1.000      0.713      0.199     -0.475      0.130     -0.044     -0.427
MATH67        0.713      1.000      0.098     -0.347      0.083     -0.036     -0.285
STRA8PR       0.199      0.098      1.000     -0.296      0.591      0.508     -0.268
STRF8PR      -0.475     -0.347     -0.296      1.000     -0.066     -0.212      0.210
SUPA8PR       0.130      0.083      0.591     -0.066      1.000      0.561     -0.159
SUPF8PR      -0.044     -0.036      0.508     -0.212      0.561      1.000     -0.176
NSXS85       -0.427     -0.285     -0.268      0.210     -0.159     -0.176      1.000
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Table 59

Means, Standard Deviations, and Correlations of Variables for Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with High Externality

N-S Externality GT 14

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              MEAN    STD DEV    LABEL                      MEAN    STD DEV   LABEL

GPA2P        68.765     8.676                  GPA2P       69.000     8.700
READ67        7.737     1.611                  MATH67       6.676     1.258
STRA8PR       3.761     0.519                  STRA8PR      3.759     0.527
STRF8PR       1.526     0.404                  STRF8PR      1.530     0.410
SUPA8PR       4.145     0.413                  SUPA8PR      4.140     0.418
SUPF8PR       2.079     0.478                  SUPF8PR      2.061     0.474
NSXS85       17.912     2.288                  NSXS85      17.909     2.323

N OF CASES =        34                         N OF CASES =        33

CORRELATION

              GPA2P      READ67     STRA8PR     STRF8PR     SUPA8PR     SUPF8PR      NSXS85

GPA2P         1.000       0.302       0.496      -0.376       0.086      -0.200       0.051
READ67        0.302       1.000       0.041      -0.296      -0.117       0.077      -0.148
STRA8PR       0.496       0.041       1.000      -0.328       0.495       0.014      -0.077
STRF8PR      -0.376      -0.296      -0.328       1.000      -0.109       0.338       0.520
SUPA8PR       0.086      -0.117       0.495      -0.109       1.000       0.129      -0.101
SUPF8PR      -0.200       0.077       0.014       0.338       0.129       1.000       0.033
NSXS85        0.051      -0.148      -0.077       0.520      -0.101       0.033       1.000


 CORRELATION

              GPA2P      MATH67     STRA8PR     STRF8PR     SUPA8PR     SUPF8PR      NSXS85

GPA2P         1.000       0.564       0.506      -0.388       0.100      -0.172       0.053
MATH67        0.564       1.000       0.407      -0.410       0.101       0.068      -0.261
STRA8PR       0.506       0.407       1.000      -0.327       0.495       0.009      -0.078
STRF8PR      -0.388      -0.410      -0.327       1.000      -0.106       0.356       0.520
SUPA8PR       0.100       0.101       0.495      -0.106       1.000       0.115      -0.102
SUPF8PR      -0.172       0.068       0.009       0.356       0.115       1.000       0.032
NSXS85        0.053      -0.261      -0.078       0.520      -0.102       0.032       1.000
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Table 60

Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with Low Externality

Including Reading

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.3724	0.1387	0.1160	6.118	.018	0.1387	6.118	.018	IN:	READ67	0.3724	0.3724
2	0.4984	0.2484	0.2078	6.115	.005	0.1098	5.403	.026	IN:	NSXS85	-0.3472	-0.4275
3	0.5044	0.2544	0.1923	4.095	.013	0.0060	0.289	.594	IN:	STRA8PR	0.0804	0.1995
4	0.6152	0.3785	0.3075	5.329	.002	0.1241	6.988	.012	IN:	STRF8PR	-0.3761	-0.4746
5	0.6193	0.3836	0.2929	4.231	.004	0.0050	0.278	.601	IN:	SUPA8PR	0.0890	0.1303
6	0.6727	0.4525	0.3529	4.545	.002	0.0689	4.153	.050	IN:	SUPF8PR	-0.3322	-0.0440

Including Mathematics

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.7125	0.5077	0.4947	39.188	0.000	0.5077	39.188	0.000	IN:	MATH67	0.7125	0.7125
2	0.7500	0.5626	0.5389	23.792	0.000	0.0549	4.641	.038	IN:	NSXS85	-0.2444	-0.4275
3	0.7537	0.5680	0.5320	15.777	0.000	0.0054	0.453	.505	IN:	STRA8PR	0.0765	0.1995
4	0.7806	0.6093	0.5646	13.644	0.000	0.0413	3.698	.063	IN:	STRF8PR	-0.2260	-0.4746
5	0.7811	0.6101	0.5527	10.640	0.000	0.0008	0.071	.792	IN:	SUPA8PR	0.0358	0.1303
6	0.7985	0.6376	0.5717	9.677	0.000	0.0275	2.507	.123	IN:	SUPF8PR	-0.2141	-0.0440

Table 61

Results of Regression of Grade Point Average on THIS Predictor Subscales, Reading or Mathematics, and Nowicki-Strickland Locus of Control, for Students with High Externality

Including Reading

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.3023	0.0914	0.0630	3.219	.082	0.0914	3.219	.082	IN:	READ67	0.3023	0.3023
2	0.3174	0.1008	0.0428	1.737	.193	0.0094	0.323	.574	IN:	NSXS85	0.0978	0.0508
3	0.5853	0.3426	0.2769	5.212	.005	0.2418	11.036	.002	IN:	STRA8PR	0.4935	0.4955
4	0.6366	0.4052	0.3232	4.940	.004	0.0626	3.054	.091	IN:	STRF8PR	-0.3226	-0.3756
5	0.6458	0.4170	0.3129	4.005	.007	0.0118	0.565	.459	IN:	SUPA8PR	-0.1274	0.0863
6	0.6578	0.4327	0.3066	3.432	.012	0.0157	0.747	.395	IN:	SUPF8PR	-0.1418	-0.2000

Including Mathematics

Step	Multr	Rsq	Adjrsq	F(equ)	Sigf	Rsqch	Fch	Sigch		Variable	Betain	Correl
1	0.5638	0.3178	0.2958	14.443	.001	0.3178	14.443	.001	IN:	MATH67	0.5638	0.5638
2	0.6004	0.3605	0.3179	8.457	.001	0.0427	2.003	.167	IN:	NSXS85	0.2140	0.0526
3	0.6696	0.4484	0.3914	7.859	.001	0.0879	4.621	.040	IN:	STRA8PR	0.3247	0.5061
4	0.7119	0.5068	0.4364	7.194	0.000	0.0584	3.317	.079	IN:	STRF8PR	-0.3088	-0.3878
5	0.7165	0.5133	0.4232	5.696	.001	0.0065	0.361	.553	IN:	SUPA8PR	-0.0946	0.1003
6	0.7247	0.5252	0.4156	4.793	.002	0.0118	0.647	.428	IN:	SUPF8PR	-0.1236	-0.1718

Table 62

Correlations among Regression Analysis Variables for Students with Low Externality Separately for Boys and Girls

Boys

	GPA2P	READ67	MATH67	STRA8PR	STRF8PR	SUPA8PR	SUPF8PR	NSXS85
GPA2P	1.0000 (22) P=*****	0.0245 (22) P= .457	0.6979 (22) P=0.000	-0.0048 (22) P= .492	-0.4618 (22) P= .015	-0.2442 (22) P= .137	-0.3590 (22) P= .050	-0.2573 (22) P= .124
READ67	0.0245 (22) P= .457	1.0000 (22) P=*****	0.1846 (22) P= .205	0.3427 (22) P= .059	-0.2308 (22) P= .151	-0.1103 (22) P= .313	0.0987 (22) P= .331	-0.1210 (22) P= .296
MATH67	0.6979 (22) P=0.000	0.1846 (22) P= .205	1.0000 (22) P=*****	0.0561 (22) P= .402	-0.4078 (22) P= .030	-0.1418 (22) P= .264	-0.2105 (22) P= .173	-0.0344 (22) P= .440
STRA8PR	-0.0048 (22) P= .492	0.3427 (22) P= .059	0.0561 (22) P= .402	1.0000 (22) P=*****	-0.2155 (22) P= .168	0.4827 (22) P= .011	0.4377 (22) P= .021	0.0998 (22) P= .329
STRF8PR	-0.4618 (22) P= .015	-0.2308 (22) P= .151	-0.4078 (22) P= .030	-0.2155 (22) P= .168	1.0000 (22) P=*****	0.1560 (22) P= .244	-0.2366 (22) P= .145	0.0888 (22) P= .347
SUPA8PR	-0.2442 (22) P= .137	-0.1103 (22) P= .313	-0.1418 (22) P= .264	0.4827 (22) P= .011	0.1560 (22) P= .244	1.0000 (22) P=*****	0.5146 (22) P= .007	0.3141 (22) P= .077
SUPF8PR	-0.3590 (22) P= .050	0.0987 (22) P= .331	-0.2105 (22) P= .173	0.4377 (22) P= .021	-0.2366 (22) P= .145	0.5146 (22) P= .007	1.0000 (22) P=*****	0.2504 (22) P= .131
NSXS85	-0.2573 (22) P= .124	-0.1210 (22) P= .296	-0.0344 (22) P= .440	0.0998 (22) P= .329	0.0888 (22) P= .347	0.3141 (22) P= .077	0.2504 (22) P= .131	1.0000 (22) P=*****

Table 62 cont'd

Girls

	GPA2P	READ67	MATH67	STRA8PR	STRF8PR	SUPA8PR	SUPF8PR	NSXS85
GPA2P	1.0000 (18) P=*****	0.7728 (18) P=0.000	0.8259 (18) P=0.000	0.1900 (18) P= .225	-0.3646 (18) P= .068	0.3854 (18) P= .057	0.0959 (18) P= .352	-0.5182 (18) P= .014
READ67	0.7728 (18) P=0.000	1.0000 (18) P=*****	0.7018 (18) P= .001	0.0617 (18) P= .404	-0.2525 (18) P= .156	0.2357 (18) P= .173	0.1156 (18) P= .324	-0.4454 (18) P= .032
MATH67	0.8259 (18) P=0.000	0.7018 (18) P= .001	1.0000 (18) P=*****	0.1301 (18) P= .303	-0.3131 (18) P= .103	0.3176 (18) P= .100	0.1325 (18) P= .300	-0.4852 (18) P= .021
STRA8PR	0.1900 (18) P= .225	0.0617 (18) P= .404	0.1301 (18) P= .303	1.0000 (18) P=*****	-0.2637 (18) P= .145	0.6106 (18) P= .004	0.4794 (18) P= .022	-0.3917 (18) P= .054
STRF8PR	-0.3646 (18) P= .068	-0.2525 (18) P= .156	-0.3131 (18) P= .103	-0.2637 (18) P= .145	1.0000 (18) P=*****	-0.1873 (18) P= .228	0.0190 (18) P= .470	0.2512 (18) P= .157
SUPA8PR	0.3854 (18) P= .057	0.2357 (18) P= .173	0.3176 (18) P= .100	0.6106 (18) P= .004	-0.1873 (18) P= .228	1.0000 (18) P=*****	0.5011 (18) P= .017	-0.4790 (18) P= .022
SUPF8PR	0.0959 (18) P= .352	0.1156 (18) P= .324	0.1325 (18) P= .300	0.4794 (18) P= .022	0.0190 (18) P= .470	0.5011 (18) P= .017	1.0000 (18) P=*****	-0.4639 (18) P= .026
NSXS85	-0.5182 (18) P= .014	-0.4454 (18) P= .032	-0.4852 (18) P= .021	-0.3917 (18) P= .054	0.2512 (18) P= .157	-0.4790 (18) P= .022	-0.4639 (18) P= .026	1.0000 (18) P=*****

Table 63

Correlations among Regression Analysis Variables for Students with High Externality Separately for Boys and Girls

Boys

	GPA2P	READ67	MATH67	STRA8PR	STRF8PR	SUPA8PR	SUPF8PR	NSXS85
GPA2P	1,0000 (18) P=*****	0,5249 (18) P= ,013	0,5791 (18) P= ,006	0,5703 (18) P= ,007	-0,5042 (18) P= ,016	0,1724 (18) P= ,247	-0,3149 (18) P= ,102	-0,0291 (18) P= ,454
READ67	0,5249 (18) P= ,013	1,0000 (18) P=*****	0,3950 (18) P= ,052	0,2637 (18) P= ,145	-0,3963 (18) P= ,052	-0,1348 (18) P= ,297	0,1139 (18) P= ,326	-0,1532 (18) P= ,272
MATH67	0,5791 (18) P= ,006	0,3950 (18) P= ,052	1,0000 (18) P=*****	0,5105 (18) P= ,015	-0,2972 (18) P= ,116	0,0754 (18) P= ,383	-0,0579 (18) P= ,410	-0,0881 (18) P= ,364
STRA8PR	0,5703 (18) P= ,007	0,2637 (18) P= ,145	0,5105 (18) P= ,015	1,0000 (18) P=*****	-0,3156 (18) P= ,101	0,4485 (18) P= ,031	-0,1865 (18) P= ,229	-0,4228 (18) P= ,040
STRF8PR	-0,5042 (18) P= ,016	-0,3963 (18) P= ,052	-0,2972 (18) P= ,116	-0,3156 (18) P= ,101	1,0000 (18) P=*****	0,2879 (18) P= ,123	0,5311 (18) P= ,012	0,4440 (18) P= ,032
SUPA8PR	0,1724 (18) P= ,247	-0,1348 (18) P= ,297	0,0754 (18) P= ,383	0,4485 (18) P= ,031	0,2879 (18) P= ,123	1,0000 (18) P=*****	-0,0495 (18) P= ,423	0,0962 (18) P= ,352
SUPF8PR	-0,3149 (18) P= ,102	0,1139 (18) P= ,326	-0,0579 (18) P= ,410	-0,1865 (18) P= ,229	0,5311 (18) P= ,012	-0,0495 (18) P= ,423	1,0000 (18) P=*****	0,1127 (18) P= ,328
NSXS85	-0,0291 (18) P= ,454	-0,1532 (18) P= ,272	-0,0881 (18) P= ,364	-0,4228 (18) P= ,040	0,4440 (18) P= ,032	0,0962 (18) P= ,352	0,1127 (18) P= ,328	1,0000 (18) P=*****

Table 63 cont'd

Girls

	GPA2P	READ67	MATH67	STRA8PR	STRF8PR	SUPA8PR	SUPF8PR	NSXS85
GPA2P	1.0000	0.1503	0.5467	-0.0343	-0.1222	-0.3032	-0.1582	-0.0600
	(17)	(17)	(16)	(16)	(16)	(16)	(16)	(17)
	P=*****	P= .282	P= .014	P= .450	P= .326	P= .127	P= .279	P= .410
READ67	0.1503	1.0000	0.5024	0.0730	-0.2295	0.1489	0.1261	-0.0016
	(17)	(17)	(16)	(16)	(16)	(16)	(16)	(17)
	P= .282	P=*****	P= .024	P= .394	P= .196	P= .291	P= .321	P= .498
MATH67	0.5467	0.5024	1.0000	0.3743	-0.5388	0.0922	0.2223	-0.3897
	(16)	(16)	(16)	(15)	(15)	(15)	(15)	(16)
	P= .014	P= .024	P=*****	P= .085	P= .019	P= .372	P= .213	P= .068
STRA8PR	-0.0343	0.0730	0.3743	1.0000	-0.3546	0.3580	0.2036	-0.1181
	(16)	(16)	(15)	(16)	(16)	(16)	(16)	(16)
	P= .450	P= .394	P= .085	P=*****	P= .089	P= .087	P= .225	P= .332
STRF8PR	-0.1222	-0.2295	-0.5388	-0.3546	1.0000	-0.5151	0.0995	0.7212
	(16)	(16)	(15)	(16)	(16)	(16)	(16)	(16)
	P= .326	P= .196	P= .019	P= .089	P=*****	P= .021	P= .357	P= .001
SUPA8PR	-0.3032	0.1489	0.0922	0.3580	-0.5151	1.0000	0.2709	-0.4629
	(16)	(16)	(15)	(16)	(16)	(16)	(16)	(16)
	P= .127	P= .291	P= .372	P= .087	P= .021	P=*****	P= .155	P= .035
SUPF8PR	-0.1582	0.1261	0.2223	0.2036	0.0995	0.2709	1.0000	-0.1214
	(16)	(16)	(15)	(16)	(16)	(16)	(16)	(16)
	P= .279	P= .321	P= .213	P= .225	P= .357	P= .155	P=*****	P= .327
NSXS85	-0.0600	-0.0016	-0.3897	-0.1181	0.7212	-0.4629	-0.1214	1.0000
	(17)	(17)	(16)	(16)	(16)	(16)	(16)	(17)
	P= .410	P= .498	P= .068	P= .332	P= .001	P= .035	P= .327	P=*****

Table 64

Items Associated with Teacher Rating Scale Factors

1. Positive Behavior.

If another student wants to fight, this student moves away from the situation.

If another student wants to fight, this student comes to you/another adult for help.

If this student does not do well on a classroom test, she/he asks you for explanation/other help.

This student comes to class with paper and pencil.

This student comes to class with appropriate textbook or other materials.

This student follows classroom rules and teacher requests.

This student pays attention to lessons and directions for assignments.

When this student has a homework assignment, he/she does it at home.

When this student has a homework assignment, he/she does it on his/her own.

When this student has a homework assignment, he/she completes the assignment.

When this student has a homework assignment, he/she does the assignment correctly.

This student acts as if he/she feels good about her/himself.

This student takes responsibility for her/his own actions.

In interaction with others, this student is considerate.

2, Negative Behavior.

During instruction, this student distracts certain other students.

During instruction, this student gets distracted by other students.

During instruction, this student joins in general class disruptions.

If another student wants to fight, this student gets into a fight.

If another student wants to fight, this student defends him/herself verbally.

If this student does not do well on a classroom test, she/he acts as if it didn't matter.

If this student does not do well on a classroom test, she/he gets mad at you or others.

If this student does not do well on a classroom test, she/he seems to give up.

In interaction with others, this student is assertive.

Table 65

Means and Standard Deviations of Teacher Rating Scale Scores for Positive Behavior and Negative Behavior, and of Other Scores, for Cohort Students in the TRS Sample

All

Variable	Cases	Mean	Std dev
GPA2P	57	71.9296	10.5625
READ67	57	8.2763	1.7568
MATH67	56	7.2375	2.0351
STRA8PR	56	3.7446	0.4849
STRF8PR	56	1.3844	0.3276
SUPA8PR	56	4.1261	0.4306
SUPF8PR	56	2.0834	0.4892
DISTRES	56	1.9571	0.5500
POSBE	57	123.7719	37.9384
NEGBE	57	61.1930	18.5813
COGLCF	32	12.5625	2.9723
SOCLCF	32	13.9062	2.6072
PHYLCF	32	14.1875	2.6328
HSES85	53	32.3962	5.6512
PSES85	53	29.6679	3.6376
SSES85	53	29.4717	4.3660
STRA8PR	56	3.7446	0.4849
SUPA8PR	56	4.1261	0.4306

Boys

Variable	Cases	Mean	Std dev
GPA2P	31	69.2258	10.8250
READ67	31	8.4323	1.7728
MATH67	31	7.0355	1.9496
STRA8PR	30	3.5565	0.4391
STRF8PR	30	1.4125	0.3261
SUPA8PR	30	4.0237	0.3785
SUPF8PR	30	1.9893	0.4988
DISTRES	30	1.9156	0.5550
POSBE	31	107.9355	39.0691
NEGBE	31	67.5806	19.9128

Girls

Variable	Cases	Mean	Std dev
GPA2P	26	75.1538	9.4560
READ67	26	7.9808	1.7397
MATH67	25	7.4880	2.1499
STRA8PR	26	3.9617	0.4496
STRF8PR	26	1.3519	0.3327
SUPA8PR	26	4.2442	0.4633
SUPF8PR	26	2.1919	0.4637
DISTRES	26	2.0051	0.5510
POSBE	26	142.6538	26.6577
NEGBE	26	53.5769	13.6621

Table 66

Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior

All Cohort Students for whom TRS Scores Available

	GPA2P	READ67	MATH67	STRASPR	STRFSPR	SUPASPR	SUPFSPR	DISTRES	POSBE	NEGBE
GPA2P	1.0000 (57) P=*****	0.4415 (57) P=0.000	0.7297 (56) P=0.000	0.2807 (56) P= .018	-0.3723 (56) P= .002	0.1185 (56) P= .192	-0.0171 (56) P= .450	-0.1367 (56) P= .158	0.6719 (57) P=0.000	-0.5023 (57) P=0.000
READ67	0.4415 (57) P=0.000	1.0000 (57) P=*****	0.4611 (56) P=0.000	0.2091 (56) P= .061	-0.2372 (56) P= .039	0.1180 (56) P= .193	0.1270 (56) P= .175	-0.1139 (56) P= .202	0.3560 (57) P= .003	-0.2137 (57) P= .055
MATH67	0.7297 (56) P=0.000	0.4611 (56) P=0.000	1.0000 (56) P=*****	0.1990 (55) P= .073	-0.3745 (55) P= .002	0.1479 (55) P= .141	0.0395 (55) P= .387	-0.1995 (55) P= .072	0.5851 (56) P=0.000	-0.4972 (56) P=0.000
STRASPR	0.2807 (56) P= .018	0.2091 (56) P= .061	0.1990 (55) P= .073	1.0000 (56) P=*****	-0.2376 (56) P= .039	0.5450 (56) P=0.000	0.4250 (56) P= .001	-0.1159 (56) P= .197	0.4316 (56) P=0.000	-0.3330 (56) P= .006
STRFSPR	-0.3723 (56) P= .002	-0.2372 (56) P= .039	-0.3745 (55) P= .002	-0.2376 (56) P= .039	1.0000 (56) P=*****	-0.1274 (56) P= .175	-0.0619 (56) P= .325	0.4556 (56) P=0.000	-0.2335 (56) P= .042	0.1674 (56) P= .109
SUPASPR	0.1185 (56) P= .192	0.1180 (56) P= .193	0.1479 (55) P= .141	0.5450 (56) P=0.000	-0.1274 (56) P= .175	1.0000 (56) P=*****	0.3984 (56) P= .001	-0.2624 (56) P= .025	0.2398 (56) P= .038	-0.2464 (56) P= .034
SUPFSPR	-0.0171 (56) P= .450	0.1270 (56) P= .175	0.0395 (55) P= .387	0.4250 (56) P= .001	-0.0619 (56) P= .325	0.3984 (56) P= .001	1.0000 (56) P=*****	0.1213 (56) P= .187	0.0931 (56) P= .248	-0.0101 (56) P= .470
DISTRES	-0.1367 (56) P= .158	-0.1139 (56) P= .202	-0.1995 (55) P= .072	-0.1159 (56) P= .197	0.4556 (56) P=0.000	-0.2624 (56) P= .025	0.1213 (56) P= .187	1.0000 (56) P=*****	-0.0737 (56) P= .295	0.1587 (56) P= .121
POSBE	0.6719 (57) P=0.000	0.3560 (57) P= .003	0.5851 (56) P=0.000	0.4316 (56) P=0.000	-0.2335 (56) P= .042	0.2398 (56) P= .038	0.0931 (56) P= .248	-0.0737 (56) P= .295	1.0000 (57) P=*****	-0.9081 (57) P=0.000
NEGBE	-0.5023 (57) P=0.000	-0.2137 (57) P= .055	-0.4972 (56) P=0.000	-0.3330 (56) P= .006	0.1674 (56) P= .109	-0.2464 (56) P= .034	-0.0101 (56) P= .470	0.1587 (56) P= .121	-0.9081 (57) P=0.000	1.0000 (57) P=*****

Table 67

Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior

Boys

	GPA2P	READ67	MATH67	STRASPR	STRFSPR	SUPASPR	SUPFSPR	DISTRES	POSBE	NEGBE
GPA2P	1.0000 (31) P=*****	0.4183 (31) P= .010	0.7070 (31) P=0.000	0.3231 (30) P= .041	-0.3785 (30) P= .020	-0.0194 (30) P= .459	-0.1311 (30) P= .245	-0.2171 (30) P= .125	0.6388 (31) P=0.000	-0.4461 (31) P= .006
READ67	0.4183 (31) P= .010	1.0000 (31) P=*****	0.3426 (31) P= .030	0.5732 (30) P=0.000	-0.2486 (30) P= .093	0.0206 (30) P= .457	0.2489 (30) P= .092	-0.0553 (30) P= .386	0.5148 (31) P= .002	-0.2620 (31) P= .077
MATH67	0.7070 (31) P=0.000	0.3426 (31) P= .030	1.0000 (31) P=*****	0.2361 (30) P= .105	-0.3640 (30) P= .024	-0.1152 (30) P= .272	-0.0894 (30) P= .319	-0.1887 (30) P= .159	0.5683 (31) P=0.000	-0.4001 (31) P= .013
STRASPR	0.3231 (30) P= .041	0.5732 (30) P=0.000	0.2361 (30) P= .105	1.0000 (30) P=*****	-0.2709 (30) P= .074	0.4135 (30) P= .012	0.2954 (30) P= .056	-0.2090 (30) P= .134	0.3547 (30) P= .027	-0.1407 (30) P= .229
STRFSPR	-0.3785 (30) P= .020	-0.2486 (30) P= .093	-0.3640 (30) P= .024	-0.2709 (30) P= .074	1.0000 (30) P=*****	0.1575 (30) P= .203	-0.0483 (30) P= .400	0.2331 (30) P= .108	-0.2059 (30) P= .138	0.1096 (30) P= .282
SUPASPR	-0.0194 (30) P= .459	0.0206 (30) P= .457	-0.1152 (30) P= .272	0.4135 (30) P= .012	0.1575 (30) P= .203	1.0000 (30) P=*****	0.1955 (30) P= .150	-0.2970 (30) P= .055	0.0904 (30) P= .317	-0.0422 (30) P= .412
SUPFSPR	-0.1311 (30) P= .245	0.2489 (30) P= .092	-0.0894 (30) P= .319	0.2954 (30) P= .055	-0.0483 (30) P= .400	0.1955 (30) P= .150	1.0000 (30) P=*****	0.1202 (30) P= .263	0.0369 (30) P= .423	0.1192 (30) P= .265
DISTRES	-0.2171 (30) P= .125	-0.0553 (30) P= .386	-0.1887 (30) P= .159	-0.2090 (30) P= .134	0.2331 (30) P= .108	-0.2970 (30) P= .055	0.1202 (30) P= .263	1.0000 (30) P=*****	-0.1669 (30) P= .189	0.2683 (30) P= .076
POSBE	0.6388 (31) P=0.000	0.5148 (31) P= .002	0.5683 (31) P=0.000	0.3547 (30) P= .027	-0.2059 (30) P= .138	0.0904 (30) P= .317	0.0369 (30) P= .423	-0.1669 (30) P= .189	1.0000 (31) P=*****	-0.8803 (31) P=0.000
NEGBE	-0.4461 (31) P= .006	-0.2620 (31) P= .077	-0.4001 (31) P= .013	-0.1407 (30) P= .229	0.1096 (30) P= .282	-0.0422 (30) P= .412	0.1192 (30) P= .265	0.2683 (30) P= .076	-0.8803 (31) P=0.000	1.0000 (31) P=*****

Table 68

Correlations of Grade Point Average, Reading and Math Test Scores, Stressor and Support Appraisal and Frequency Scores, and Distress with Teacher Rating Scale Positive and Negative Behavior

Girls

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              GPA2P     READ67     MATH67    STRABPR    STRFBPR    SUPABPR    SUPFBPR    DISTRES      POSBE      NEGBE

GPA2P        1.0000     0.6219     0.7880     0.0255    -0.3431     0.1340    -0.0002    -0.0964     0.6446    -0.4528
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P******    P=0.000    P=0.000    P= .451    P= .043    P= .257    P= .500    P= .320    P=0.000    P= .010

READ67       0.6219     1.0000     0.6442    -0.0320    -0.2582     0.2970     0.0442    -0.1635     0.4146    -0.3411
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P=0.000    P******    P=0.000    P= .438    P= .101    P= .070    P= .415    P= .212    P= .018    P= .044

MATH67       0.7880     0.6442     1.0000     0.1008    -0.3725     0.3411     0.1507    -0.2316     0.7025    -0.6793
            (   25)    (   25)    (   25)    (   25)    (   25)    (   25)    (   25)    (   25)    (   25)    (   25)
            P=0.000    P=0.000    P******    P= .315    P= .033    P= .048    P= .236    P= .133    P=0.000    P=0.000

STRABPR      0.0255    -0.0320     0.1008     1.0000    -0.1628     0.5802     0.4845    -0.1176     0.2050    -0.3036
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P= .451    P= .438    P= .316    P******    P= .213    P= .001    P= .006    P= .284    P= .158    P= .066

STRFBPR     -0.3431    -0.2582    -0.3725    -0.1628     1.0000    -0.3546    -0.0380     0.7345    -0.2440     0.2039
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P= .043    P= .101    P= .033    P= .213    P******    P= .038    P= .427    P=0.000    P= .115    P= .159

SUPABPR      0.1340     0.2970     0.3411     0.5802    -0.3546     1.0000     0.5443    -0.2951     0.2230    -0.3423
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P= .257    P= .070    P= .048    P= .001    P= .038    P******    P= .002    P= .072    P= .137    P= .043

SUPFBPR     -0.0002     0.0442     0.1507     0.4845    -0.0380     0.5443     1.0000     0.0904    -0.0831     0.0153
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P= .500    P= .415    P= .236    P= .006    P= .427    P= .002    P******    P= .330    P= .343    P= .470

DISTRES     -0.0964    -0.1635    -0.2316    -0.1175     0.7345    -0.2951     0.0904     1.0000    -0.0649     0.1183
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P= .320    P= .212    P= .133    P= .284    P=0.000    P= .072    P= .330    P******    P= .376    P= .283

POSBE        0.6446     0.4146     0.7025     0.2050    -0.2440     0.2230    -0.0831    -0.0649     1.0000    -0.9255
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P=0.000    P= .018    P=0.000    P= .158    P= .115    P= .137    P= .343    P= .376    P******    P=0.000

NEGBE       -0.4528    -0.3411    -0.6793    -0.3036     0.2039    -0.3423     0.0153     0.1183    -0.9255     1.0000
            (   26)    (   26)    (   25)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)    (   26)
            P= .010    P= .044    P=0.000    P= .066    P= .159    P= .043    P= .470    P= .283    P=0.000    P******
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Table 69

Correlations of Connell Locus of Control for Failure Domain Scores, Hare Self-Esteem Domain Scores, and Stressor and Support Appraisal Scores with TRS Positive and Negative Behavior Scores

All Cohort Students for whom TRS Scores Available

	COSLCF	SOCLCF	PHYLCF	HSES85	PSES85	SSES85	STRAPPR	SUPAPPR	POSBE	NEGBE
COSLCF	1.0000 (32) P=******	0.6231 (32) P=0.000	0.4519 (32) P= .005	-0.0331 (31) P= .430	0.2858 (31) P= .060	-0.1777 (31) P= .169	-0.0997 (31) P= .297	-0.2276 (31) P= .109	-0.2798 (32) P= .060	0.2179 (32) P= .115
SOCLCF	0.6231 (32) P=0.000	1.0000 (32) P=******	0.4773 (32) P= .003	-0.1038 (31) P= .289	-0.0253 (31) P= .446	-0.4407 (31) P= .007	0.1468 (31) P= .215	0.0650 (31) P= .364	0.0373 (32) P= .420	-0.0659 (32) P= .360
PHYLCF	0.4519 (32) P= .005	0.4773 (32) P= .003	1.0000 (32) P=******	-0.1814 (31) P= .164	0.0446 (31) P= .406	-0.2630 (31) P= .076	-0.1303 (31) P= .242	-0.2437 (31) P= .093	-0.2357 (32) P= .097	0.2571 (32) P= .078
HSES85	-0.0331 (31) P= .430	-0.1039 (31) P= .289	-0.1814 (31) P= .164	1.0000 (55) P=******	0.2998 (55) P= .013	0.3692 (55) P= .003	-0.0955 (54) P= .246	-0.0333 (54) P= .405	-0.0037 (55) P= .489	0.0444 (55) P= .374
PSES85	0.2859 (31) P= .060	-0.0253 (31) P= .446	0.0446 (31) P= .406	0.2998 (55) P= .013	1.0000 (55) P=******	0.4146 (55) P= .001	0.0048 (54) P= .486	-0.0877 (54) P= .264	0.0495 (55) P= .360	0.0622 (55) P= .326
SSES85	-0.1777 (31) P= .169	-0.4407 (31) P= .007	-0.2630 (31) P= .076	0.3692 (55) P= .003	0.4146 (55) P= .001	1.0000 (55) P=******	0.0978 (54) P= .241	-0.1758 (54) P= .102	0.4323 (55) P=0.000	-0.3436 (55) P= .005
STRAPPR	-0.0997 (31) P= .297	0.1468 (31) P= .215	-0.1303 (31) P= .242	-0.0955 (54) P= .246	0.0048 (54) P= .486	0.0978 (54) P= .241	1.0000 (58) P=******	0.5571 (58) P=0.000	0.4175 (58) P= .001	-0.3548 (58) P= .003
SUPAPPR	-0.2276 (31) P= .109	0.0650 (31) P= .364	-0.2437 (31) P= .093	-0.0333 (54) P= .405	-0.0877 (54) P= .264	-0.1758 (54) P= .102	0.5571 (58) P=0.000	1.0000 (58) P=******	0.2022 (58) P= .064	-0.3063 (58) P= .010
POSBE	-0.2798 (32) P= .060	0.0373 (32) P= .420	-0.2357 (32) P= .097	-0.0037 (55) P= .489	0.0495 (55) P= .360	0.4323 (55) P=0.000	0.4175 (58) P= .001	0.2022 (58) P= .064	1.0000 (59) P=******	-0.8485 (59) P=0.000
NEGBE	0.2179 (32)	-0.0659 (32)	0.2571 (32)	0.0444 (55)	0.0622 (55)	-0.3436 (55)	-0.3548 (58)	-0.3063 (58)	-0.8485 (59)	1.0000 (59)

Table 70

t-Tests of Differences between Male and Female Teachers' Behavior Ratings for Total Sample of Project Students Rated in 1984-85

(Pairs analysis: Cases with ratings by both male and female teachers)

```
Variable    Number               Standard   Standard  *(Difference) Standard    Standard   *          2-tail *    T     Degrees of 2-tail
           of cases      Mean   Deviation    Error    *      Mean    Deviation    Error    * Corr.  Prob.  *  Value    Freedom   Prob.
---------------------------------------------------------------------------------------------------------------------------------------
POSBETM                                               *                                    *                *
                       2.7587     0.836      0.082    *                                    *                *
              105                                     *    -0.0025      0.644      0.063   * 0.697  0.000   *  -0.04      104      0.968
                       2.7613     0.817      0.080    *                                    *                *
POSBETF                                               *                                    *                *
---------------------------------------------------------------------------------------------------------------------------------------
NEGBETM                                               *                                    *                *
                       2.1577     0.671      0.065    *                                    *                *
              105                                     *     0.1206      0.499      0.049   * 0.725  0.000   *   2.48      104      0.015
                       2.0370     0.675      0.066    *                                    *                *
NEGBETF                                               *                                    *                *
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POSBETM = Positive Behavior Ratings by Male Teachers
POSBETF = " " " " Female "
NEGBETM = Negative Behavior Ratings by Male Teachers
NEGBETF = " " " " Female "

Table 71

t-Tests of Differences between Male and Female Teachers' Behavior Ratings of Boys and of Girls in Total Sample of Project Students in 1984-85

Ratings for Boys

Variable	Number of cases	Mean	Standard Deviation	Standard Error	(Difference) Mean	Standard Deviation	Standard Error	Corr.	2-tail Prob.	T Value	Degrees of Freedom	2-tail Prob.
POSBETM	48	2.5438	0.913	0.132	0.2076	0.698	0.101	0.689	0.000	2.06	47	0.045
POSBETF		2.3361	0.850	0.123								
NEGBETM	52	2.3590	0.710	0.099	0.0374	0.544	0.075	0.702	0.000	0.50	51	0.622
NEGBETF		2.3216	0.698	0.097								

Ratings for Girls

Variable	Number of cases	Mean	Standard Deviation	Standard Error	(Difference) Mean	Standard Deviation	Standard Error	Corr.	2-tail Prob.	T Value	Degrees of Freedom	2-tail Prob.
POSBETM	59	2.9356	0.716	0.093	-0.1842	0.532	0.069	0.681	0.000	-2.66	58	0.010
POSBETF		3.1198	0.581	0.076								
NEGBETM	59	1.9906	0.592	0.077	0.2053	0.441	0.057	0.694	0.000	3.58	58	0.001
NEGBETF		1.7853	0.521	0.068								

Table 72

Correlations between Academic Coping Inventory Subscales and the Stressor Variables for the Whole Sample and for Boys and Girls Separately

Academic Coping Inventory Subscales	Stressor Reaction	Stressor Frequency
Whole Sample (*N* = 156)		
Positive Coping	.09	.00
Non-Coping	.10	.26***
Projection	-.11*	.20***
Denial	-.15**	.06
Boys (*n* = 71)		
Positive Coping	.08	-.06
Non-Coping	.08	.25***
Projection	-.19*	.28**
Denial	-.18*	-.08
Girls (*n* = 85)		
Positive Coping	-.06	.06
Non-Coping	.09	.25**
Projection	-.06	.17*
Denial	-.09	.17*

* *p*<.10. ** *p*<.05. *** *p*<.01.

Table 73

Significant Correlations among Academic Coping Inventory Subscales and Hare Self-Esteem Scale Subscales and Nowicki-Strickland Externality of Control Scale for the Whole Sample and for Boys and Girls Separately

Total (N = 147)	Positive Coping	Projection	Denial	Non-Coping
General self-esteem	.18*	-.25**	-.27***	-.16*
School self-esteem	.24**	-.27**	-.28***	-.18*
Home self-esteem	.17*	-.18*	-.27***	
Peer self-esteem				
N-S Externality (N = 65)		.16*	.17*	.25**
Boys (n = 65)				
General self-esteem				
School self-esteem		-.30**		-.27*
Home self-esteem				
Peer self-esteem				
N-S Externality (n = 72)		.24*	.33**	
Girls (n = 82)				
General self-esteem	.22*	-.32**	-.44***	
School self-esteem	.29**	-.25*	-.41***	
Home self-esteem		-.31**	-.47***	
Peer self-esteem				
N-S Externality (n = 87)				.34**

* $p<.05$. ** $p<.01$. *** $p<.001$.

Table 74

MEANS AND STANDARD DEVIATIONS OF VARIABLES FOR FOUR GROUPS DEFINED BY GENDER AND READING SCORES ABOVE 6.7 AND EQUAL TO AND BELOW 6.7

	Boys				Girls			
	GT 6.7		LE 6.7		GT 6.7		LE 6.7	
	(n = 36)		(n =42)		(n = 31)		(n = 53)	
Variable[a]	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Positive Coping	3.4	.5	3.5	.5	3.7	.3	3.5	.5
Projection	2.0	.7	1.8	.7	2.0	.7	1.8	.6
Denial	2.2	.7	2.2	.6	2.1	.6	2.1	.6
Non-coping	2.7	.6	2.5	.6	2.8	.8	2.5	.7
Adjusted 1984 Reading Score	8.2	1.4	5.7	.7	7.7	1.1	5.9	.7
Final GPA[b]	72.8	10.6	66.1	9.6	79.0	8.3	72.6	8.6
Total Self-Esteem[c]	88.8	9.7	92.4	9.5	96.1	10.3	93.2	9.9
School Self-Esteem[d]	27.7	4.1	29.4	2.9	30.4	4.2	29.8	4.5
Locus of Control[e]	12.8	3.9	14.5	3.7	13.4	4.0	15.1	4.3
Stressor Reaction	64.7	7.0	61.1	8.1	71.3	6.8	68.7	10.4
Stressor Frequency	30.2	5.3	27.7	4.6	28.0	5.3	29.1	5.9

[a] Due to the unavailability of some of the variable scores, the number of subjects reflected in each mean varies.

[b] Boys GT 6.7 vs Girls GT 6.7, $t(66) = -2.68$, $p < .01$.
Boys GT 6.7 vs Boys LE 6.7, $t(77) = 2.90$, $p < .01$.

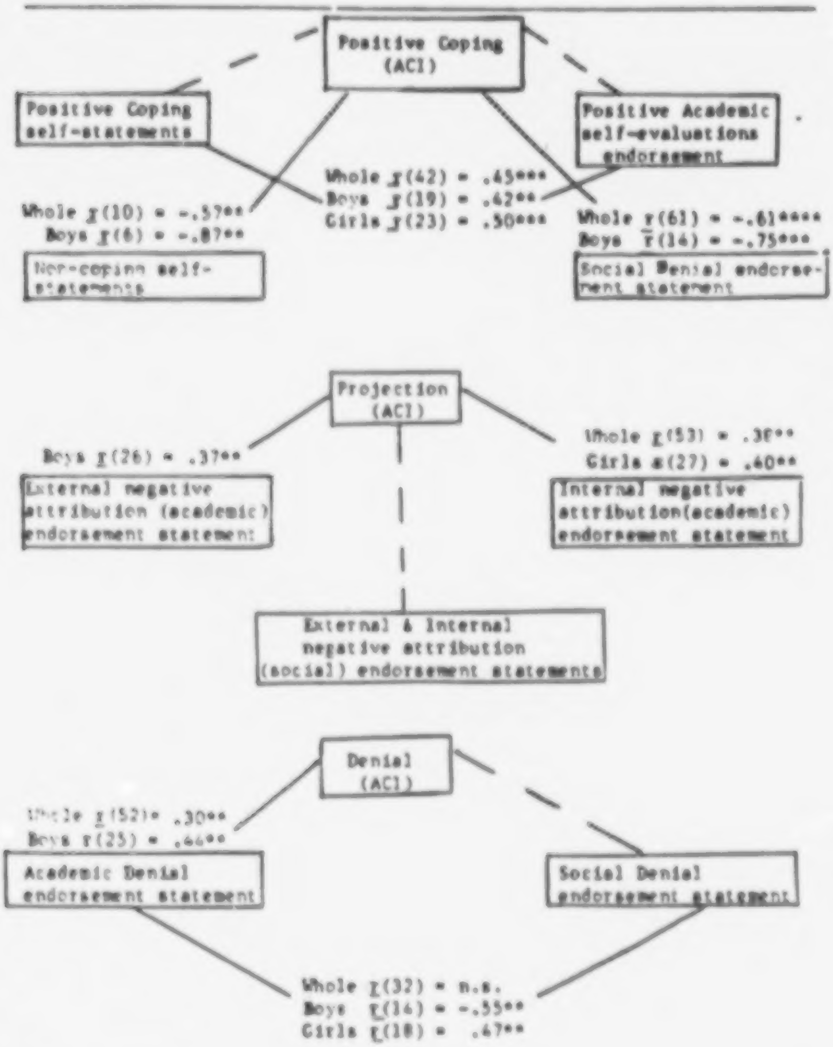
[c] Boys GT 6.7 vs Girls GT 6.7, $t(52) = -2.65$, $p < .05$.
Boys GT 6.7 vs Girls LE 6.7, $t(72) = -1.86$, $p < .10$.

[d] Boys GT 6.7 vs Girls GT 6.7, $t(52) = -2.35$ $p < .05$.

[e] Boys GT 6.7 vs Girls LE 6.7, $t(80) = -2.39$, $p < .05$.

Table 75

Correlations among Academic Coping Inventory Subscales, Retrospective Self-statements and Checklist Endorsement Statements for Whole Sample and for Boys and Girls


Positive Coping (ACI)
Positive Coping self-statements
Positive Academic self-evaluations endorsement
Whole r(42) = .45***
Boys r(19) = .62**
Girls r(23) = .50***
Whole r(10) = -.57**
Boys r(6) = -.87**
Whole r(61) = -.61****
Boys r(14) = -.75***
Non-coping self-statements
Social Denial endorsement statement
Projection (ACI)
Boys r(26) = .37**
Whole r(53) = .38**
Girls r(27) = .40**
External negative attribution (academic) endorsement statement
Internal negative attribution(academic) endorsement statement
External & Internal negative attribution (social) endorsement statements
Denial (ACI)
Whole r(52) = .30**
Boys r(25) = .44**
Academic Denial endorsement statement
Social Denial endorsement statement
Whole r(32) = n.s.
Boys r(14) = -.55**
Girls r(18) = .47**

continued

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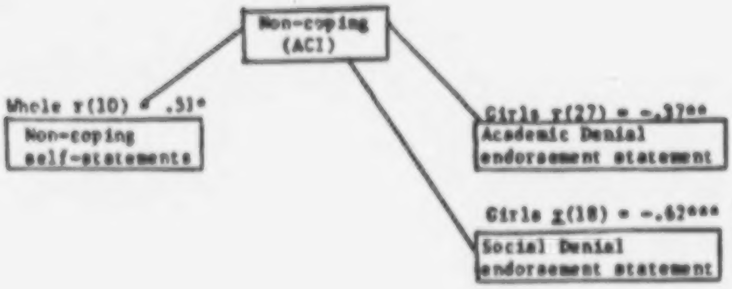
Table 75, cont'd.


Non-coping (ACI)
Whole r(10) = .51*
Non-coping self-statements
Girls r(27) = -.37**
Academic Denial endorsement statement
Girls r(18) = -.62***
Social Denial endorsement statement

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* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

______ Significant correlations

— — — Insignificant correlations

Table 76

LIST OF UPSETTING SITUATIONS
FROM INTERVIEWS OF STUDENTS IN SPRING, 1985

1.	Lunchroom: noise, chaos, food fights	22
2.	Kids not cooperating, being disrespectful to each other	20
3.	Teachers blaming kids, picking on, calling stupid, saying won't pass	13
4.	Kids bullying, picking on, bothering, excluding	10
5.	Fights	10
6.	Not going out for lunch	10
7.	Teachers not teaching: not explaining, not answering, being absent, putting work on board and doing crosswords	9
8.	Chaos in class: substitute teachers, disrespect to teachers	8
9.	Academic troubles: poor grades, trouble with tests, not finishing work, boring classes, fear of being put back	7
10.	Bathrooms: dirty, locked, smoking	6
11.	Boys bothering girls	6
12.	Miscellaneous	8

Taken from interviews of the 53 students in subsample plus an additional 7 from the larger sample.

Table 77

Percentages of Students Making Positive Coping Self-Statements in the Stressful Academic and Social Situations by Status Group

Group	Academic Situation	Social Situation
1. High GPA/High Stressor Frequency (n = 15)	93	26
2. High GPA/Low Stressor Frequency (n = 15)	87	33
3. Low GPA/High Stressor Frequency (n = 15)	60	13
4. Low GPA/Low Stressor Frequency (n = 8)	75	13

Table 78

Means and Standard Deviations and Significant t values for Comparison of the Four Status Groups defined by High and Low Stressor Frequency and Mid-year Grade Point Average

	GROUP 1 Hi STRF/Hi GPA (N = 15)		GROUP 2 Lo STRF/Hi GPA (N = 15)		GROUP 3 Hi STRF/Lo GPA (N = 15)		GROUP 4 Lo STRF/Lo GPA (N = 8)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Positive Coping	3.6	.5	3.4	.4	3.5	.6	3,6	.5
2. Projection	2.0	.7	1.8	.6	2.3	.7	1.9	.6
3. Denial	2.1	.7	1.9	.4	2.3	.8	2.4	.6
4. Non-Coping	2.4	.7	2.4	.8	2.9	.7	2.8	.8
5. Adjusted 1984 Reading Score	7.1	2.1	8.2	2.0	6.3	1.7	6.4	1.1
6. GPA	79.9	6.1	84.1	9.6	67.9	7.1	60.7	5.7
7. Stressor Reaction	68.6	10.5	72.1	6.6	64.5	6.4	67.0	6.5
8. Stressor Frequency	35.5	4.1	23.4	1.	36.2	4.7	24.1	3.3
9. Total self-esteem	89.3	10.3	102.3	9.7	87.0	7.9	94.3	9.2
10. N-S Ext. Cont.	14.1	3.7	11.4	4.3	14.4	3.8	14.0	5.1

2. Gr 2 vs Gr 3: $t(28) = 2.24^{**}$

3. Gr 2 vs Gr 4: $t(23) = 2.3^{**}$

5. Gr 2 vs Gr 3: $t(28) = 2.8^{***}$; Gr 2 vs Gr 4: $t(21) = 3.0^{***}$

6. By design, Gr 1 & Gr 2 significantly higher than Gr 3 & Gr 4

7. Gr 2 vs Gr 3: $t(28) = 3.2^{***}$

8. By design, Gr 1 & Gr 3 significantly higher than Gr 2 & Gr 4

9. Gr 1 vs Gr 2: $t(28) = 3.55^{***}$; Gr 2 vs Gr 3: $t(28) = 7.83^{****}$;
Gr 2 vs Gr 4: $t(21) = 2.28^{**}$; Gr 3 vs Gr 4: $t(21) = 1.9$

10. Gr 2 vs Gr 3: $t(28) = 2.14^{**}$

$^{*}p<.10$. $^{**}p<.05$. $^{***}p<.01$. $^{****}p<.001$.

Table 79

Percentages of Students Making Positive Appraisals[*] in Stressful Academic and Social Situations by Status Group

Group	Academic Situation	Social Situation
1. High GPA/High Stressor Frequency (*n* = 15)	73	53
2. High GPA/Low Stressor Frequency (*n* = 15)	93	67
3. Low GPA/High Stressor Frequency (*n* = 15)	93	40
4. Low GPA/Low Stressor Frequency (*n* = 8)	88	25

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[*] Students stated they could make changes in the situation rather than just having to accept it.

Table 80

Correlations between Students' Responses to The Academic Coping Inventory in 1985 and 1986

	Total Sample (N=62)	Boys (n=37)	Girls (n=25)
Positive Coping	.29**	.23*	.35**
Projection	.28**	.25*	.33*
Denial	.27**	ns	.34**
Non-coping	.46****	.51***	.41**

* p<.10. ** p<.05. *** p<.01. **** p<.001.

Table 81

Means and Standard Deviations and Significant t Values for Comparison of Boys and Girls

	BOYS (n=36)		GIRLS (n=25)	
Variable	Mean	S.D.	Mean	S.D.
Positive Coping 1985	3.5	(.5)	3.6	(.4)
Projection 1985	2.0	(.6)	2.0	(.6)
Denial 1985	2.2	(.7)	2.0	(.6)
Non-coping 1985	2.6	(.6)	2.5	(.8)
Positive Coping 1986	3.3	(.6)	3.5	(.4)
Projection 1986	2.0	(.7)	1.9	(.6)
Denial 1986	2.1	(.6)	1.9	(.5)
Non-coping 1986	2.4	(.6)	2.4	(.6)
Final GPA 1985	71.4[a]	(11.7)	77.7	(9.7)
Final GPA 1986	72.9[b]	(10.1)	77.8	(8.3)
Stressor Frequency 1985	29.5	(5.4)	31.0	(7.1)
Stressor Frequency 1986	29.9	(5.9)	28.7	(6.2)
Negative Teacher Rating	42.5[c]	(16.1)	31.2	(10.7)
Positive Teacher Rating	114.7[d]	(39.3)	145.8	(26.0)

[a] $t = -2.3$, $p<.05$, two-tailed test
[b] $t = -2.0$, $p<.05$, "
[c] $t = 3.3$, $p<.01$, "
[d] $t = -3.2$, $p<.01$, "

Table 82

Means and Standard Deviations and Significant *t* Values ($p < .05$) for Comparison of the Four Status Groups defined by High and Low Stressor Frequency and Mid-year Grade Point Average

	Group 1 Hi STRF/Hi GPA (n=8)		Group 2 Lo STRF/Hi GPA (n=8)		Group 3 Hi STRF/Lo GPA (n=10)		Group 4 Lo STRF/Lo GPA (n=5)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Positive Coping 1985[a]	3.6	.5	3.3	.3	3.4	.6	3.8	.3
Projection 1985[b]	1.9	.7	1.8	.6	2.4	.6	1.9	.6
Denial 1985[c]	2.1	.9	2.1	.5	2.1	.7	2.6	.1
Non-coping 1985[d]	2.3	.8	2.0	.9	3.0	.6	2.5	.5
Positive Coping 1986	3.6	.4	3.2	1.0	3.5	.4	3.6	.4
Projection 1986[d]	1.8	.5	1.8	.5	2.3	.5	1.9	.6
Denial 1986	1.8	.5	2.0	.6	2.2	.7	2.3	.3
Non-coping 1986[e]	2.4	.5	1.9	.7	2.5	.4	2.3	.2
Final GPA 1985[f]	79.6	6.6	86.3	8.8	66.6	7.0	59.0	6.5
Final GPA 1986[f]	78.7	5.9	81.0	16.9	67.9	7.3	60.1	11.6
Strers Freq 1985[g]	36.1	4.8	23.4	1.4	35.9	4.1	22.6	2.9
Stress Freq 1986[h]	28.1	5.1	24.6	4.3	33.6	6.0	26.6	3.5
Neg Tcher Rating[i]	27.1	3.8	30.0	9.2	51.2	15.5	60.2	14.4
Pos Tcher Rating[f]	156.0	14.5	154.8	20.7	96.8	29.6	82.8	28.3
Acad Coping (TR)[f]	3.8	.2	3.4	.7	2.3	.9	1.8	.7
Soc Coping (TR)[j]	2.8	.4	2.5	.4	2.3	.5	2.1	.2
Acad Proj (TR)[i]	1.6	.3	1.6	.3	2.1	.8	2.5	.5
Soc Proj (TR)[i]	1.3	.6	1.5	.5	2.3	1.0	2.7	.8
Acad Den (TR)[i]	1.0	.1	1.2	.3	2.5	.7	2.9	1.1
Acad Non-cop (TR)[i]	1.0	.1	1.3	.3	2.4	1.0	2.7	.6

[a] Groups 1 & 4 higher than 2 & 3
[b] Group 3 higher than all others
[c] Group 4 higher than 2 & 3
[d] Group 3 higher than 1 & 2
[e] Group 3 higher than 2
[f] Groups 1 & 2 higher than 3 & 4
[g] Groups 1 & 3 higher than 2 & 4
[h] Group 1 no longer higher than 2; but 3 continued higher than 2 & 4
[i] Groups 1 & 2 lower than 3 & 4
[j] Group 1 higher than 3 & 4; Group 2 higher than 4

Table 83 - Table 90

These table numbers were not used.

Table 91

Correlations Between Three Perceived Dimensions of Control and Four Achievement Variables

	Internal Control		Powerful others Control		Unknown Control	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	18**	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	ns	-.21**	ns
Reading Test Average	ns	ns	ns	ns	-.24**	-.34***
Math Test Score	ns	ns	ns	ns	-.24**	-.20**

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 92

Correlations Between Perceived Dimensions with Successful Outcomes of Control and Achievement Variables

	Internal Control in Successful Outcomes		Powerful Others Control in Successful Outcomes		Unknown Control in Successful Outcomes	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	.23**	ns	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	-.16*	-.23**	-.20**
Reading Test Score	ns	.30***	ns	-.44****	-.26**	-.46****
Math Test Score	ns	ns	ns	ns	-.30***	-.26**

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 93

Correlations Between Perceived Dimensions with Failure Outcomes of Control and Achievement Variables

	Internal Control in Failure Outcomes		Powerful Others Control in Failure Outcomes		Unknown Control in Failure Outcomes	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	ns	ns	ns
Reading Test Score	ns	ns	ns	-.20**	ns	ns
Math Test Score	ns	ns	ns	ns	ns	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 94

Correlations Between Perceived Dimensions of Control within the Social Domain in Relation to Achievement Variables

	Internal Control		Powerful Others Control		Unknown Control	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	.26**	14*	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	-.25**	-.17*	ns
Reading Test Score	ns	ns	ns	-.47****	ns	ns
Math Test Score	ns	ns	-.25**	-.23**	-.25**	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 95

Correlations Between Perceived Dimensions of Control within the Cognitive Domain in Relation to Achievement Variables

	Internal Control		Powerful Others Control		Unknown Control	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	ns	-.26**	ns
Final Grade Point Average	ns	ns	ns	ns	-.20*	-.17**
Reading Test Score	ns	.20**	ns	-.38****	-.39***	-.35***
Math Test Score	.18*	ns	ns	ns	-.22*	-.30***

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 96

Correlations Between Perceived Dimensions of Control within the Physical Domain in Relation to Achievement Variables

	Internal Control		Powerful Others Control		Unknown Control	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	ns	ns	-.17*
Reading Test Score	-.22**	ns	ns	-.22**	ns	-.43****
Math Test Score	ns	ns	ns	ns	-.24**	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 97

Correlations Between Perceived Dimensions of Control within the General Domain in Relation to Achievement Variables

	Internal Control		Powerful Others Control		Unknown Control	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	ns	ns	ns
Reading Test Score	ns	-.18*	ns	ns	ns	-.35****
Math Test Score	ns	ns	-.27**	ns	ns	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 98

Correlations Between Connell's Relative Internality for Success and Failure with Achievement Variables

	Relative Internality for Success		Relative Internality for Failure	
	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	24**	ns	ns	ns
Final Grade Point Average	ns	23**	ns	ns
Reading Test Score	ns	.57****	ns	ns
Math Test Score	ns	ns	ns	ns

***p<.10 **p<.05 ***p<.01 ****p<.001**

Table 99

Correlations Between Bethea's Relative Internality for Success within Four Domains and Achievement

	Relative Internality for Success in Social Domain		Relative Internality for Success in Cognitive Domain		Relative Internality for Success in General Domain		Relative Internality for Success in Physical Domain	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	.26*	ns	.21*	ns	ns	ns	ns	ns
Final Grade Point Average	ns	.18**	ns	.20**	ns	ns	ns	ns
Reading Test Score	ns	.50****	ns	.50****	ns	ns	ns	.28**
Math Test Score	.29**	.21**	ns	.19**	ns	ns	ns	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 100

Correlations Between Dimensions and Successful Outcomes of Control within the Social Domain in Relation to Achievement

	Internal Control in Successful Outcomes		Powerful Others Control in Successful Outcomes		Unknown Control in Successful Outcomes	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	.27**	ns	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	-.19**	-.21**	ns
Reading Test Score	ns	.31**	ns	-.44****	ns	-.14*
Math Test Score	ns	ns	ns	-.22**	-.39***	-.19*

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 101

Correlations Between Dimensions and Failure Outcomes of Control within the Social Domain in Relation to Achievement

	Internal Control in Failure Outcomes		Powerful Others Control in Failure Outcomes		Unknown Control in Failure Outcomes	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	-.16*	ns	ns
Final Grade Point Average	ns	ns	ns	-.24**	ns	ns
Reading Test Score	ns	-.18**	-.24**	-.34***	ns	ns
Math Test Score	ns	ns	-.22*	ns	ns	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 102

Correlations Between Dimensions and Successful Outcomes of Control within the Cognitive Domain in Relation to Achievement

	Internal Control in Successful Outcomes		Powerful Others Control in Successful Outcomes		Unknown Control in Successful Outcomes	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	.15*	ns	ns	-.25**	-.19**
Final Grade Point Average	ns	.25**	ns	ns	-.17*	-.21**
Reading Test Score	ns	.30**	ns	-.44****	-.36**	-.37****
Math Test Score	.23**	.21**	ns	ns	-.27**	-.35**

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 103

Correlations Between Dimensions and Failure Outcomes of Control within the Cognitive Domain in Relation to Achievement

	Internal Control in Failure Outcomes		Powerful Others Control in Failure Outcomes		Unknown Control in Failure Outcomes	
	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	ns	-.18*	ns
Final Grade Point Average	ns	ns	ns	ns	-.16*	ns
Reading Test Score	ns	ns	ns	-.24**	-.28**	-.22**
Math Test Score	ns	ns	ns	ns	ns	-.15*

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 104

Correlations Between Defensive Externality and Congruency in Relation to Achievement

	Defensive Externality		Congruency	
	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	ns
Reading Test Score	ns	ns	ns	-.34**
Math Test Score	ns	ns	ns	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 105

Correlations Between Defensive Externality within Four Domains and Achievement

	Defensive Externality in Cognitive Domain		Defensive Externality in Social Domain		Defensive Externality in General Domain		Defensive Externality in Physical Domain	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	.19**	ns	ns	ns	ns	ns	ns
Final Grade Point Average	ns	.15*	ns	ns	ns	ns	ns	ns
Reading Test Score	ns	ns	ns	ns	ns	ns	ns	ns
Math Test Score	.17*	ns	ns	ns	ns	ns	ns	ns

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 106

Correlations Between Congruency within Four Domains and Achievement

	Congruency in Cognitive Domain		Congruency in Social Domain		Congruency in General Domain		Congruency in Physical Domain	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	-.18*	ns	ns	ns	ns	ns	ns	ns
Final Grade Point Average	ns	ns	ns	-.25***	ns	ns	ns	ns
Reading Test Score	ns	-.37****	ns	-.46****	ns	ns	ns	-.21**
Math Test Score	ns	ns	-.25**	-.23**	-.27**	ns	ns	ns

***p<.10   **p<.05   ***p<.01   ****p<.001**

Table 107

Correlations Between Three Perceived Dimensions of Control and Self Esteem Variables

	Internal Control		Powerful Others Control		Unknown Control	
	Boys	Girls	Boys	Girls	Boys	Girls
Total Self Esteem	-.23*	ns	-.42**	-.46****	-.40**	-.39****
School Self Esteem	ns	ns	-.42**	-.38****	-.43**	-.24**
Home Self Esteem	ns	-.15*	-.39**	-.39****	-.28**	-.37****
Peer Self Esteem	ns	ns	ns	-.28**	-.25**	-.29**

*p<.10 **p<.05 ***p<.01 ****p<.001

Table 108

Correlations Between Defensive Externality and Congruency with Self Esteem Variables

	Defensive Externality		Congruency	
	Boys	Girls	Boys	Girls
Total Self Esteem	-.23*	-.27**	-.44**	-.45****
School Self Esteem	-.34**	-.19**	-.43**	-.35***
Home Self Esteem	-.27**	-.30**	-.38**	-.40****
Peer Self Esteem	ns	ns	-.19*	-.27**

***p<.10   **p<.05   ***p<.01   ****p<.001**

Table 109

Correlations Between Achievement and Self-Esteem Variables

	Total Self Esteem		School Self Esteem		Home Self Esteem		Peer Self Esteem	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Mid-year Grade Point Average	ns	.28**	.41***	.41****	ns	ns	ns	ns
Final Grade Point Average	ns	.33***	.39***	.41****	ns	.18*	ns	.15*
Reading Test Score	-.26**	.36***	-.40***	.21**	ns	.42****	ns	.19*
Math Test Score	ns	.40****	ns	.34****	ns	.26*	ns	.35***

*p<.10 **p<.05 ***p<.01 ****p<.001

APPENDIX A

MATERIALS FOR SCHOOL-WIDE AND CLASSROOM INTERVENTIONS, 1984-1985 SCHOOL YEAR

Appendix A-1

PROJECT ON ACADEMIC STRIVING

Responses to Academic Environment Inventory, 1983-84

Stressor reaction:

1. I was warned I might not pass a subject or pass to the next grade.
2. Someone hit me, or kicked or punched me.
3. Someone treated me like I always do wrong.
   I did worse on a test than I should have.
4. Someone tried to copy my work when I didn't want them to.
5. Someone was picking on me in the hall.

Stressor frequency:

1. People in the classroom wouldn't get quiet.
2. People in the hall were bothering the classroom.
3. There was a lot of cursing in class.
4. Someone tried to copy my work when I didn't want them to.
5. There was a change of teachers in one (or more) of my classes.

Support reaction:

1. I did well on a test or homework assignment.
2. I helped a friend who had a problem.
3. Someone said I did something right.
4. Somebody said something to cheer me up.
5. Someone helped me do something I needed to do.

Support frequency:

1. I did well on a test or homework assignment.
2. Someone said I did something right.
3. Someone said something to cheer me up.
4. Someone gave me a hug or pat on the back.
5. I got to be in a class or group with other students I like.
   I helped a friend who had a problem.

Appendix A-2

Some Correlations of Data: Project on Academic Striving

	STRREA	STRFRE	SUPREA	SUPFRE	CWRT	CWMT	GPA4	ABS2S
STRREA	1.00	-.08	.56	.15	.09	.06	.28	-.09
		N.S.	P=.00	N.S.	N.S.	N.S.	P=.02	N.S.
STRFRE	-.08	1.00	-.33	-.11	-.35	-.35	-.33	-.04
	N.S.		P=.01	N.S.	P=.00	P=.00	P=.01	N.S.
SUPREA	.56	-.33	1.00	.09	.27	.24	.36	-.10
	P=.00	P=.01		N.S.	P=.02	P=.03	P=.00	N.S.
SUPFRE	.16	-.11	.09	1.00	.03	-.05	.05	-.00
	N.S.	N.S.	N.S.		N.S.	N.S.	N.S.	N.S.

CODE:

STRREA= Stressor reaction
STREFRE= Stressor frequency
SUPREA= Support reaction
SUPFRE= Support frequency
CWRT= City-wide reading test
CWMT= City-wide math test
GPA4= Grade point average, Spring, 1984
ABS2S= Absences, second semester

9684

Appendix A-3

INTERMEDIATE SCHOOL

- Principal

CODE OF CONDUCT

Sept.10,1984

TO ALL STUDENTS

I.S. is our school. It belongs to the students who come here to learn and to the teachers who come here to teach. In many ways, it is like our home away from home. For good learning and teaching to take place, our school's atmosphere should be friendly, calm and respectful.

We ask students to follow this Code of Conduct so that our school will be a safe and pleasant place to learn and play. We also ask for parents' support and cooperation.

1. Students should speak respectfully to each other and to all the adults in the school.
2. All students are to report to their home rooms at 8:40 AM.
3. All students must bring pencils, pens and notebooks to school.
4. No student is to leave his/her books in school overnight.
5. Students are not to get out of their assigned seats or leave their assigned seats, or leave their classrooms without permission from their teachers.
6. Students who are found in halls after the late bell rings, and without a pass, will be considered cutting.
7. All students must walk on the right side of the hallway at all times.
8. All students must walk quietly in the hallway at all times.
9. Periodically there will be silent passing.
10. Classes are to travel to their subject classes as a group in a straight line with the class president at the back carrying the section sheet.
11. Students are not to use bathrooms during the change of periods.
12. All students must make special effort to get to class on time.
13. Anyone caught defacing school property will be held responsible for cleaning it up or in case of breaking a glass, pay for it.
14. Anyone caught fighting or inciting a fight will be disciplined accordingly or will be excluded from classes or school.
15. No food is to be brought into the building at any time.
16. No radios are allowed.

PROJECT ON ACADEMIC STRIVING

Memo: To 7th and 8th Grade Teachers October 1, 1984

DESCRIPTION OF PROJECT

The purpose of the Project on Academic Striving is to try to identify the upsetting events (stressors) which affect students' attendance and school achievement as well as the events which provide support. The Project's mode of operation is action-research with about equal amounts of time and energy spent on researching the various connections between students' perceptions of stress, achievement, self-esteem, and sense of personal control and activities to make the school environment more conducive to learning and to enable students to cope better with the demands of school. In both the research and action aspects of the Project we have sought and benefited from the ideas and experience of the staff of I.S. #

Last year, the Project focused primarily on the 6th grade and the input of 6th grade teachers was particularly valuable. In the 1984-85 school year we plan to focus on both the 7th and 8th grades; and we invite 7th and 8th grade teachers to work with us. We would like to continue some of the ways of working with the students, such as group guidance activities and small group counseling, that we initiated last year but we are also open to your ideas of new ways that we could be supportive of students and teachers.

ACADEMIC STRIVING RESOURCE CENTER

The Project plans to set up Room 128 as a resource center with materials for teachers on group guidance activities and group activities for academic class sessions. The Resource Center will be open for a lunch meeting every Wednesday (12:00-12:40 PM). Each Wednesday, different topics and materials will be discussed and ideas for their use will be shared by Project staff and teachers. If teachers wish to arrange additional time with Project staff for the development of activities or discussion of students' problems or their own stress, they may negotiate this at the Wednesday meeting, or by speaking with one of us in our office in the Guidance Office, or by leaving a message in our mailbox. We hope to be as supportive as our time and resources permit. Participation by teachers in the project is completely voluntary and teachers will be compensated for the time spent in lunch or afterschool meetings.

Project staff schedules: Monday - Wanda Bethea

Tuesday - Joseph Grannis, Mary Ellen Fahs, Kay Matthews

Wednesday - Wanda Bethea, Joseph Grannis, Mary Ellen Fahs, Kay Matthews

Thursday - Kay Matthews

INTRODUCTORY PROCEDURES

In the next week, Project staff would like to visit each 7th and 8th grade class to say "Hello" to students already in the project and explain the project briefly to the others. We would then like to distribute permission slips to students not in the project. We would appreciate any help the teachers can give us in collecting these new permissions. We would like to be able to enroll as many students in the project as possible.

Appendix A-5

CAREER CHOICES/HIGH SCHOOL POSSIBILITIES

1. When I am an adult, I might like to be a (1) ____________________

   or (2) ______________________________

   or (3) ______________________________

2. The following are schools or programs that might prepare me for these occupations (Try to include only schools or programs that you can apply to from your zone. You may make your lists alone or in a group).

(1)	(2)	(3)
____________	____________	____________
____________	____________	____________
____________	____________	____________
____________	____________	____________
____________	____________	____________
____________	____________	____________
____________	____________	____________
____________	____________	____________
____________	____________	____________

3. Check around in your class and find out if any schools or programs can be added to your lists above.

4. Look up the admissions requirements for these programs and schools and put a check (✓) by each for which you think you might be eligible.

5. This sheet now contains a set of high school choices to discuss with teachers, parents and friends.

Project on Academic Striving
1084

Appendix A-6

Project on Academic Striving

INTERESTING OCCUPATIONS

1. What occupations interest you for your adult life? Name three in your own words.

(a) ____

(b) ____

(c) ____

2. Look at the list of careers starting on the next page. Which three come closest to the ones you named above?

(a) ____

(b) ____

(c) ____

3. Check (✓) any other careers on the list that might interest you. Put a question mark (?) next to any that you don't know the meaning of.

4. Which careers would you want to have more information about? This can include careers you have named already. Underline the careers for which you need more information.

5. How can you or your classmates get more information about these careers? Write down your ideas here:

Appendix A-6 cont.

Accounting
Advertising
Aerospace
Agriculture
Aircraft flight training
Aircraft mechanics
Animal care
Appliance repair
Architecture
Art (fine and commercial)
Astronomy
Athletic field maintenance
Audio-visual services
Auto mechanics
Banking and finance
Behavioral science
Bookkeeping and recordkeeping
Building trades
Business careers
Business machines
Business machine repair
Carpentry (including cabinetmaking)
Ceramics
Chemistry (industrial)
Child care
Climate control (heat and air conditioning)
Clock and watch repair
Clothing
Communication arts (radio, t.v., film)
Computer science
Cosmetology
Court reporting
Dance
Data processing
Dental assisting
Dental technician
Drafting
Drama
Education
Electrical trades/ electronics
Emergency medical techniques
Engineering
Engraving
Fashion (clothing, office procedures, art, merchandising)

Appendix A-6 cont.

Food services
General contracting
Gerontology
Health careers
Home improvement
Horticulture
Hotel and restaurant management
Human services
Industrial chemistry
Insurance
Interior design
International services
Jewelry making
Journalism
Laboratory technology
Legal studies, politics community affairs
Machine shop
Marine power plant mechanics
Marine studies
Maritime occupations
Marketing
Medical science careers
Metal shop
Music
Oceanography
Optical mechanics
Photography
Plastics
Plumbing
Podiatric assisting
Police and fire science
Printing
Radio and television technology
Real estate
Recreational careers
Rehabilitation services
Sales
Secretarial services
Small engine repair
Stage design
Television
Theatre arts
Transportation
Typing
Upholstery
Woodwork
Word processing

Appendix A-7

COOPERATION - the act of working together with others

CONSIDERATION - thoughtful regard for others

DIGNITY - self-respect, worthiness, honor

GOOD MANNERS - well-behaved and polite

TRYING - Never give up (never say no) try, try again

TRUTH - sincerity, honesty, not lying

KINDNESS - act of being sympathetic, benevolent, gentle

self control - control (restraint) of one's desires, emotions, actions

LOTALTY - faithfulness

There is no business like your own business.

Do unto others as you would have others do unto you.

ATTITUDE - manner of thinking

COURTEOUS - polite

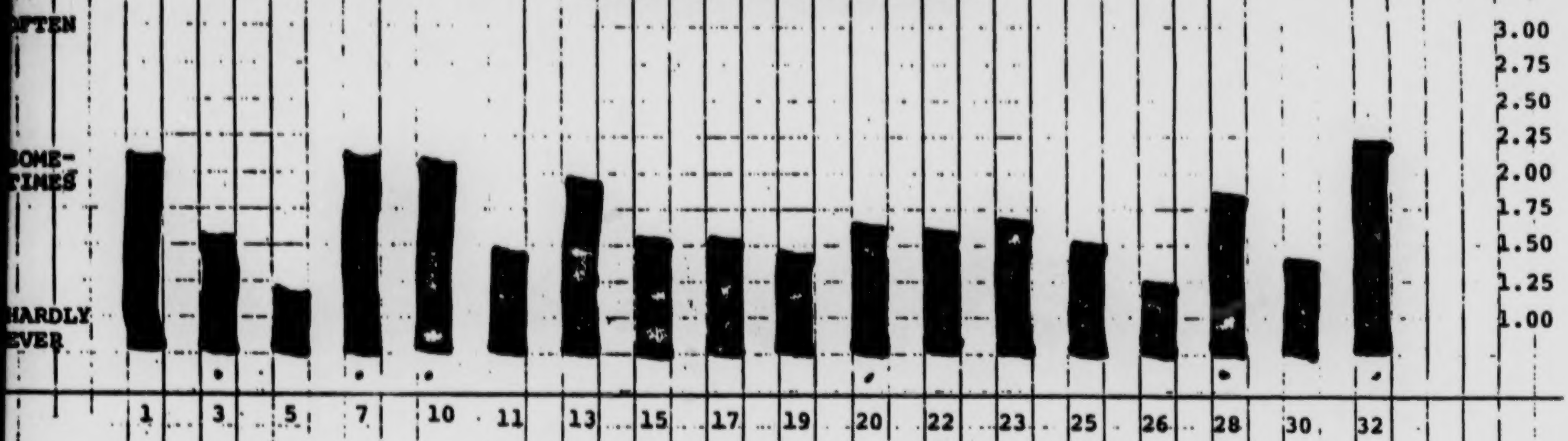
Punctual - on time

MOTIVATED - put forth effort

THINGS YOU'D LIKE TO CHANGE IN THE SCHOOL

Appendix A-8

FREQUENCY OF UPSETTING EVENTS



2.9 ①. There was a lot of cursing in class.

*3.8 3. Someone tried to copy my work when I didn't want them to.

*4.4 5. Someone hit me, or kicked or pushed me.

3.5 ⑦. I couldn't get an answer to a question I asked.

3.3 ⑩. People in the hall were bothering the classroom.

3.5 11. Someone made fun of something I said in class.

3.5 ⑬. People in the classroom wouldn't get quiet.

*4.1 15. I was warned that I might not pass a subject of pass to the next grade.

3.6 17. I or one of my friends was moved to a different class.

3.7 19. Someone shouted or screamed at me.

36 20. Someone tried to pressure me to cut class.

3.6 22. I felt unsafe in the school.

*3.45 23. I could not finish my work in class.

3.7 25. Somebody treated me like I always do wrong.

3.8 26. I didn't have a pen or paper or my book to do my work in class.

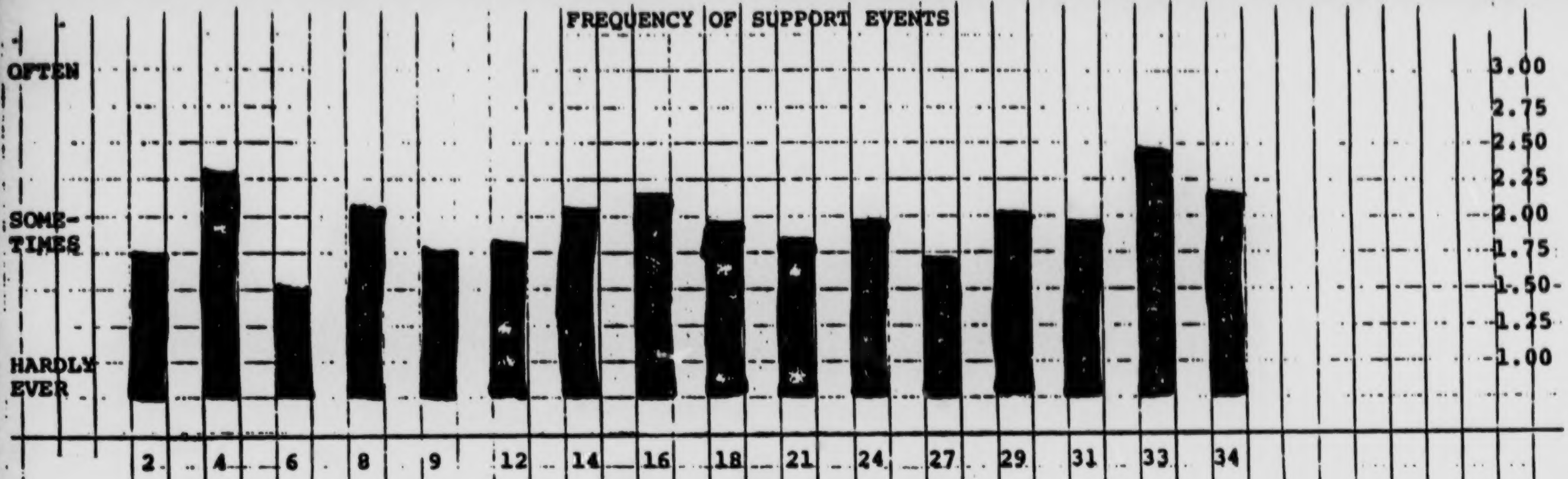
*4.2 28. I did worse on a test than I should have.

*3.85 30. Someone was picking on me in the hall.

3.3 32. There was a change of teachers in one (or more) of my classes,

x̄ = [illegible] 66.06 | x̄ = f 30.42

Appendix A-8


FREQUENCY OF SUPPORT EVENTS

2.1 2. Someone helped me do something I needed to do.
2.05 4. People paid attention to something I said in class.
1.9 6. People in the classroom spoke respectfully to each other.
1.9 8. I got to be in a class or group with other students I like.
2.1 9. Somebody stuck up for me when I was getting picked on.
2.2 12. Somebody helped me do my homework.
1.8 14. Someone helped me understand something.
1.7 16. Someone said I did something right.
2.0 18. Somebody said something to cheer me up.
1.7 21. I helped a friend who had a problem.
2.2 24. Somebody helped me make up with a friend.
2.2 27. Somebody helped me think about a personal problem.
2.2 29. Somebody asked me to be his or her friend.
2.2 31. People acted in a way that let me know they understood me.
1.6 33. I did well on a test or a homework assignment.
2.1 34. Someone gave me a hug or a pat on the back.

$\bar{X}$ = f (31.25) $\bar{X}$ = Supre 31.65

PROJECT ON ACADEMIC STRIVING

FACT or OPINION?

Here is the difference between a fact and an opinion:

a FACT is true and you can prove it

an OPINION is up to the person who believes it; you can have an argument about it

Tell whether these are fact or opinion:

1. A. Philip Randolph High School is on the campus of City College. ____________
2. Julia Richmond High School and Brandeis High School have over 3000 students each. __________
3. Martin Luther King High School has a Marching Band and a Steel Band. __________
4. Julia Richmond High School is better than Martin Luther King High School. _____
5. Mabel Dean Bacon High School is a vocational high school.___________________
6. Vocational high school have more interesting courses than academic high schools. _________________
7. One of the special programs at A. Philip Randolph is the Macy Medical Program. ________________
8. For admission to Art and Design High School, a student has to present a portfolio. _________________
9. Classes in high school will be much more interesting than at junior high school. _________________
10. Park West High School specializes in cooking and maritime trades.____________
11. Many high school classes start at 8:15 A.M. _____________________
12. The other students in high school will be much nicer than in junior high school. _________________________
13. In the Cooperative Education Program, 11th and 12th graders can go to classes part-time and work at a paid job part-time. _______________
14. It will be easier to concentrate and get work done in high school than in junior high school. ________________
15. In vocational-technical schools about half the school day is spent in shops. __________________
16. High schools have better, more helpful teachers than junior high schools. ____________________

Appendix A-10

PROJECT ON ACADEMIC STRIVING

ALL-DAY WORKSHOP, SATURDAY, JUNE 1, 1985

AGENDA

9:30 - 10:00 AM	Arrive/coffee and goodies
10:00 - 11:00 AM	Discussion of the Interim Report to the Grant Foundation
11:00 - 12:15	Review of past year's activities; begin planning for next year
12:15 - 1:15	Lunch
1:15 - 2:15 PM	Group Guidance: can it help solve some of the problems faced by students and teachers in the school environment?
2:15 - 3:15	Termination exercise: Winding up the year together
3:15 -	Refreshments and relaxation

P. A. S.
6-1-85

Principal findings from the analysis of 1983-84 data:

1. GRADE POINT AVERAGE WAS MUCH LOWER FOR BOYS THAN FOR GIRLS, EVEN THOUGH BOYS AND GIRLS HAD ABOUT THE SAME SCORES ON THE 1983 CITYWIDE TESTS IN READING AND MATHEMATICS.

2. In general, boys and girls had similar reactions to stressor events and support events in the classroom and school environment. Likewise, they reported experiencing about the same number of stressor events, and about the same number of support events, on the average. However, THE CONSEQUENCES OF STRESSOR EVENTS AND SUPPORT EVENTS WERE ONLY PARTLY THE SAME FOR BOYS AND GIRLS.

3. FOR BOTH GIRLS AND BOYS, INDIVIDUALS' DIFFERENT EXPERIENCES OF STRESSOR AND SUPPORT EVENTS (their Academic Environment Inventory scores) CONTRIBUTED TO THEIR GRADES JUST AS MUCH AS THEIR READING ABILITY (Citywide Reading Test scores) CONTRIBUTED TO THEIR GRADES.

4. FOR BOTH GIRLS AND BOYS, REACTING NEGATIVELY TO STRESSOR EVENTS, saying that these events made them upset, WAS MORE PROTECTIVE THAN REACTING NEUTRALLY OR INDIFFERENTLY TO THEM, saying that the stressor events made no difference. For both girls and boys, but especially for boys, REACTING POSITIVELY TO SUPPORT EVENTS WAS ASSOCIATED WITH HIGHER GRADES.

5. FOR GIRLS, THE LARGEST EFFECT ON GRADES THAT WAS MEASURED BY THE AEI WAS THE COMBINATION OF STRESSOR REACTION AND STRESSOR FREQUENCY.

a. For girls who reacted strongly negatively to stressor events, the frequency of stressor events did not make a difference to their grades.

(1) Some of these girls reported relatively few stressor events, also had high self-esteem and/or low test anxiety, and obtained average or above average grades. THESE GIRLS SEEMED TO BE PARTICULARLY WELL PROTECTED.

(2) Some of these girls reported a relatively high number of stressor events, had low self-esteem and/or high test anxiety, but had average or above average grades. THESE GIRLS SEEMED TO BE COPING WITH STRESS TO DO WELL IN SCHOOL.

b. For girls whose reaction to stressor events was weak or indifferent, grades tended to go down as the number of stressor events went up.

BEST COPY AVAILABLE

(1) Some of these girls had indifferent reactions, reported low frequencies of stressor events, and obtained average or above average grades. THESE GIRLS APPEARED NOT TO LET STRESSOR EVENTS GET TO THEM.

(2) Some of these girls had indifferent reactions, but reported average or high frequencies of stressor events, and tended to obtain low grades. THESE GIRLS APPEARED TO BE PARTICULARLY VULNERABLE TO STRESSOR EVENTS IN THE SCHOOL AND THE CLASSROOM.

6. FOR BOYS, THE LARGEST EFFECT OF THE AEI ON GRADES WAS THEIR REACTION TO STRESSOR EVENTS--the stronger the reaction, the higher their grades. THE BOYS' GRADES ALSO TENDED TO BE HIGHER AS THEIR REACTIONS TO SUPPORT EVENTS WERE STRONGER.

a. Some boys had strong negative reactions to stressor events and perceived these events happening frequently; had strong positive reactions to support events and/or perceived support events happening frequently; and obtained average or high grades. There was some tendency for these boys to be small in stature, to have low self-esteem, and to have an external locus of control. THESE BOYS MIGHT BE SAID TO BE JUVENILES WHO WERE COPING WITH STRESS TO DO WELL IN SCHOOL.

b. Some boys had strong negative reactions to stressor events but perceived these events happening less frequently; had strong positive reactions to support events and/or perceived them happening frequently; and obtained average or high grades. There was a tendency for these boys to be bigger, to have higher self-esteem, and to have higher test scores. THESE BOYS SEEMED TO BE CLEAR ABOUT WHAT WOULD BE STRESSFUL, BUT AT THE SAME TIME NOT FEELING STRESSED AND DOING WELL IN SCHOOL.

c. Some boys had more neutral reactions to stressor events and also to support events, reported relatively low frequencies of both kinds of events, and obtained average or high grades. These boys tended to have high reading and math test scores. THESE BOYS SEEMED TO BE "COOL" AND AT LEAST PASSING THEIR COURSES, BUT SOME OF THEM AT THE SAME TIME WERE OFF-TASK A LOT IN THE CLASSROOM.

d. Some boys had more neutral reactions to stressor events but ~~and~~ reported relatively ~~low~~ high frequencies of stressor events ~~but~~ and obtained below average grades. These boys had both lower and higher reading and math test scores. Some of them had more positive reactions to support events and/or reported these were happening more frequently, others did not. These boys tended to have lower self-esteem. SOME OF THESE BOYS CONTRIBUTE TO THE STRESS OF OTHERS IN SCHOOL, AND SOME OF THEM MAY BE DENYING OR NOT DEALING WITH THE STRESS THEY FEEL IN THEMSELVES.

7. STUDENTS WHO WERE AT RISK IN VARIOUS WAYS DID BETTER--WERE MORE ENGAGED, ACHIEVED MORE--UNDER SOME CLASSROOM CONDITIONS THAN UNDER OTHERS. Observations suggested that the following teaching and learning conditions were particularly important for students at risk:

a. The teacher respected students.

b. Task expectations were clear.

c. Appropriate task materials were available.

d. Task feedback, information about how the student was doing, was accessible--from the teacher or materials or student peers.

e. Students' seating had been arranged to promote cooperative learning, or at least to discourage distraction.

PROJECT ON ACADEMIC STRIVING

Workshop: June 1, 1985

POSITIVES IN THE SCHOOL (by project and/or others): Generated by workshop participants

1. Individual counseling of students by project staff
2. Opportunity for teachers to discuss their concerns with project staff and each other (lessened stress)
3. New programs brought to the school
4. Project staff has listened
5. Assembly program: students and teachers working together
6. Implementation of Late Room and Detention
7. Project has facilitated communication between students and students, students and teachers, and teachers and teachers to identify real problems
8. Reading scores are up; a number of special citywide and district awards to students
9. Administration is open to new programs (project, among others)
10. Project's working with special education classes; group guidance like a magic circle
11. Students more tolerant of each other; more united
12. Cooperative Learning Workshop
13. Increased self-esteem for some kids
14. Contributions by teachers to project activities (e.g. suggestions by teachers for group guidance activities)
15. Contributions by teachers to project's understanding of students (interpretations of research findings, etc.); understanding of what makes a difference for students
16. Stabilization of school program (less rescheduling)
17. Ability of stress team to help teachers with materials
18. Project's positive attitude to ALL children

NEGATIVES AND LACKS IN SCHOOL (by project and/or others):

1. Project interrupted valuable lessons (stated by project staff member)
2. Lack of discipline policy (not uniform)
3. Lack of professionalism in staff (bottom to top)
4. Not enough career counseling for students
5. Divisiveness of staff; to speak of success and act to promote failure
6. Inequality of teaching periods; no regard for seniority, etc.
7. Bell and intercom interruptions (e.g. during class periods)
8. Lack of teacher sharing of observations beneficial to all staff
9. Too many fights inside and outside of building
10. Soda machine always breaking
11. Lack of buddy-teachers and administrative observations
12. Project staff has not returned to E-H classes
13. Guards' responses are questionable
14. Improper placement of students in classes
15. Some teachers sabotage programs
16. Unavailability of supplies
17. Unclear goals for school
18. Project did not really facilitate cooperation between administration and teachers
19. Poor communication and support at District level
20. Lack of extracurricular activities to improve school spirit
21. Unsolved lunchroom situation; containment is not working

PRIORITIES (A) = 1; (B) = 2

Appendix A-11

PROJECT ON ACADEMIC STRIVING

Report from the Workshop to Discuss a Code of Conduct 6/18/85

The workshop began with a report by a member of the SIP Committee on School Climate about the efforts to develop a code of conduct for I.S. Professor Grannis indicated that this workshop was seen as a cooperative effort to give input to the SIP committee's work. It was agreed that all suggestions would be transmitted to SIP. It was also agreed that the suggestions should be typed and circulated to the staff and parents of I.S. # in anticipation of a follow-up workshop on Tuesday, June 25th from 3:05 to 4:05 in the Library.

SUGGESTIONS BY STAFF AND PARENTS PRESENT

(It is important to understand that the following list results from a "brainstorming" process which means that all suggestions are listed but that there was not necessarily agreement on them. More suggestions may be made at the follow-up workshop and there will be more discussion of the relative importance of the various items. The current code is attached.)

1. Item #1 of current code is the most important to work on from the beginning of the school year; important for adults and students

2. Item #4: there is a need for security for students' books left in school. This item needs further discussion.

3. Students should be checked at the door for pen, paper, notebooks and books

4. A respectful, orderly tone needs to be established from the first day; students also need to hear what is expected of them relating to graduation, promotion and course requirements

5. Item #5 should be rewritten: Students will be assigned to permanent seats in their classroom. Students must have permission to change seat or leave room.

6. If students come unprepared (no pens/paper), they should be sent to a Detention Room and the parent should be called

7. Item #15. Needs to be made more specific: can bring lunch but not candy, chips or junk food. Discussion of nutrition and effects of so much sugar need to be part of Health Learning.

8. Items #2 and "12 could be combined. There were positive comments on the effect of the Lateness policy initiated this spring.

9. There needs to be homework assigned on a regular basis by teachers

10. All outer garments should be kept in closets--no hats worn in school

11. No paper should be thrown on floor of hall or classrooms

12. There should be a Dress Code for all assemblies for students and staff

13. There should be a strong consistent policy about fighting in and in front of the school

14. No drugs; no smoking

15. It is up to the students to maintain a pleasant, clean lunchroom

16. Fighting shows lack of respect; when kids fight, everyone involved should be punished

17. Items #7 and #9 of current code are not top priority and should be eliminated

Concerning enforcement:

1. Deans need more time to handle problems

2. Guards need to circulate more; not be so friendly with students

3. Adults have to respect students

4. Adults have to stop "passing the buck"

5. Need to establish penalties and rewards; if students are failing, should not participate in sports, trips, etc. It was also noted that some students are working hard and still failing and that they need to be included in sports, etc. It was also noted that some special education students are the most talented.

PROJECT ON ACADEMIC STRIVING

Report from Workshop to Discuss a Code of Conduct 6/25/85

This workshop was a follow-up to the one held on June 18th in which brainstorming on suggestions for a Code of Conduct and how it could be implemented took place. It began with the request that all participants make nominations (from the current code or from the new suggestions) of the five most important items for a code. After a number of nominations were made, the participants voted on each to arrive at the five most important. The following items were suggested:

*1. Respect: Students and adults should speak and act respectfully to each other.

*2. All students must bring pencils, pens and notebooks to school.

*3. No fighting in or in front of school.

*4. No defacing of school property.

*5. All students are to report to their homerooms at 8:40 A.M.; they should get to classes on time; students in the halls will be considered cutting.

6. No use of bathrooms between classes.

7. No books left in school.

8. No radios.

For the second part of the workshop, the participants were divided into five small groups to discuss how the items considered the five most important would be implemented. Participants were asked to consider rewards for living up to the code as well as well as punishments for infractions. The following suggestions were made:

Regarding #1 respect:

1. Respect should be stressed in all classrooms and official classes. If students are disrespectful, the parents should be contacted.
2. A respectful orderly tone needs to be established from the first day; students also need to hear what is expected of them relating to graduation, promotion and course requirements.
3. Rewards: Class of the Week. Special activities: double dutch, drama club, trips. Point system: many classes could get points.
4. Punishment = detention. Suspension should be the last resort.
5. Special assembly for explanation of the rules.
6. If students use foul language, the parents should be notified.

Appendix A-11 cont.

7. Contracts for students and parents regarding the rules and regulations.
8. Discussion of the code in group guidance sessions.
9. Post rules on the bulletin boards.
10. Dean should keep log with special attention to repeaters.
11. Once a month movie, exlude offenders.
12. Teachers who speak disrespectfully should be written up by each other and/or sign contracts.
13. A reward should be some time outside at lunch time (in the back play area).
14. Detention room = study hall.

Regarding #2 (paper and pencils):

1. If don't have, must buy from G.O.
2. Certificates or pins every marking period for being prepared.
3. Notify parents.
4. Pay $.05 for a pencil in classroom.
5. Awards for neat notebooks.
6. If no pens, pencils, etc., go to detention; parents notified. Students must learn to take responsibility.

Regarding #3 (fighting):

1. Student should be suspended; if run out of suspensions, send to alternative school.
2. Suspension is not the answer; should be in-house suspension or punishment (wash off grafitti).
3. The two students caught fighting should be given a project to do together.
4. Students caught fighting should travel with the 6th grade.

Regarding #4 (no defacing property):

1. Offenders must wash off grafitti.
2. Students do not deface spaces decorated with their own work; have one grade (class) each month decorate a hallway (given space).

Regarding #5 (being on time to school and class):

1. Continue the Late Room.

2. Subtract points from class reward points.

3. After 5 lates, school staff member make call/visit.

Regarding entire Code of Conduct:

1. Hold Parents Association Meeting to discuss Code for parental input and support.

2. Have another meeting for school staff and parents for further discussion of Code of Conduct before school opens in September. Friday, September 6th would be a good day.

The following staff members and parents were present at this workshop:

(names deleted to preserve confidentiality)

Project staff: Joseph Grannis, Mary Ellen Fahs, Wanda Bethea, Kay Matthews

Appendix A-12

PROJECT ON ACADEMIC STRIVING

June 27, 1985

To: Staff and Parents of I.S. #

From: Mary Ellen Fahs, Public Education Association
Joseph C. Grannis, Teachers College

Enclosed is your compensation for the workshop to discuss a code of conduct for I.S. # on June 25th. All of the staff of the Project on Academic Striving appreciate your participation and contributions to the discussion. As you think about the workshops, it is important to remember that the goal of discipline is to make learning possible. Discipline, like other activities of the school, should be educational. When control is only suppressive without being corrective, it fails to have educational value. We all need to think of ways to help students learn to understand and control their own actions, perceive available alternatives to inappropriate behavior and accept responsibility for their own acts. A number of the suggestions made in the workshop will help I. S. # achieve a school climate that is condusive to learning and teaching, while reducing stress for adults and children alike.

Speaking of stress, we would like to share the major findings of the project for the 1983-84 school year:

1. Although boys and girls scored about the same on the citywide reading test, the girls had significantly higher mid-year grade point averages; clearly something other than reading ability was influencing the achievement of boys and girls;

2. Students with lower reading test scores seemed to experience more upsetting events in the classroom;

3. How project students responded to the questionnaire on stressors and supports in the school environment is as good a predictor of their mid-year grades as their reading test scores. In other words, the students' experience of stress and social support in the school has as much to do with their grades as their reading ability does; and

4. Students who said they would be "very upset" if stressor events happened tended to have higher grade point averages; they seemed to be able to deal better with these events or avoid them better (than students who said "makes no difference" when a stressor event happens).

The major ways in which the project is bringing service to the school can be understood better in light of these research findings. First, a climate of increased mutual respect may decrease the number of upsetting (stressful) events for students and adults; second, Cooperative Learning which encourages more active and cooperative learning by students may increase interest in academic work and achievement; and third, Group Guidance activities may help to strengthen students' reactions to stressor events in their school lives.

We hope to be able to work with all school staff to find ways to act further upon what the project is learning. In the meantime, we wish all of you a pleasant, healthy and relaxing summer!

APPENDIX B

MINUTES OF THE HUMAN RIGHTS COMMITTEE MEETINGS 1984-1985 and 1985-1986 SCHOOL YEARS

APPENDIX B

Note: There will be a meeting of the Human Rights Committee on Wednesday, October 24 at 3:00 P.M.

PROJECT ON ACADEMIC STRIVING

Minutes: Human Rights Committee Meeting, October 17, 1984

Present:

Names deleted to preserve confidentiality.

Mrs. Fahs opened the meeting by asking everyone to introduce themselves because the new officers of the Parents Association were in attendance. Professor Grannis then explained the function of the Human Rights Committee which is to review all the instruments (questionnaires) and research procedures of the Project on Academic Striving to insure that the rights, confidentiality and dignity of students, parents and school staff are protected. He then reviewed the purposes of the Project which are to try to identify the upsetting events (stressors) which affect students' attendance and school achievement and to work with teachers and other school staff to try to reduce these stressors. He commented that a number of projects have dealt with teacher stress but this is one of the few dealing with student stress. He explained that the project works by asking students about things that get in the way of their academic striving and then working with teachers on activities that will improve the learning environment. The project concentrated on the 6th grade last year and will focus on both the seventh and eighth grades this year.

A member of the committee raised the question of a statement in the minutes of the Teacher Planning Team meeting on October 3, 1984 that appeared to be a negative statement about guidance as well as why the Project was getting involved with career and high school choices. Mrs. Fahs explained that in the meetings with the teachers they had been asked about things that were currently upsetting to students. The fast-approaching deadline for high school admissions and the students' need to make choices was cited as the area of major concern. Mrs. Fahs then read the portion of the minutes that was giving concern. A discussion followed about the best way to motivate students and the need for them to take responsibility for "getting their acts together," with some indicating that telling students of the negative effects of poor attendance, etc. was a necessary part of doing this. Professor Grannis then said that he felt that it was very appropriate for the Human Rights Committee to be discussing this issue. That its function was to protect everyone's rights and that the wording of the minutes should never be hurtful to individuals in the school. Mrs. Fahs apologized for the wording and asked if the Committee members felt it would be appropriate to redo the minutes with these sentences removed. There was general agreement that the minutes should be redone.

A question was then raised about whether classroom activities about careers and high schools was within the scope of the project and whether the activities developed for teachers should have been reviewed with the committee. Professor Grannis replied that helping students to think about various career choices seemed well within the purpose of the Project on Academic Striving and that there was no research aspect to the activities. One of the parents present whose child had come home with one of the worksheets on which he had indicated several career interests spoke very approvingly of the activity. She said that she had been trying to get her son to think about these things and was delighted that his teacher had been more successful in getting him to do this than she had been. Mrs. Fahs then commented that the project's only intent was to try to help I.S.# students learn more about career choices and the subjects they would need to study to pursue their life goals. A teacher commented that this kind of discussion should really begin in the seventh grade; that students who want to apply to the arts high school need to begin working on projects, etc.

It was then asked whether anyone in the Project could help some of the more troubled Special Education children, three were mentioned in particular. A parent then asked about the Project's limitations and whether outreach to the home was included. Professor Grannis replied that the project's orginal intent had been to concentrate on school stress, that going into the home was beyond the resources of the project. He agreed with a member of the committee that one of the Project's first questionnaires had contained questions about the home, teachers and peers and that children really only commented negatively about their relations with peers. Our new instrument therefore doesn't ask the students to identify the people who cause stress. What is important in the Project's findings is that perceptions of stress are strongly related to low academic achievement. Since the project doesn't have the capacity to work individually with each child, it is trying to help create a climate in which the "bully" doesn't act out. He also agreed with a member of the committee that working with such troubled children was the purview of the Guidance Counselor. He concluded that the Project would like to be helpful to Special Education and that materials developed for regular classroom activities might be shared. He agreed to meet with teachers concerned with Special Education to discuss the matter further.

A teacher than commented that things in the school seemed much better this year and asked whether Professor Grannis felt any of it was due to the Project. He replied that he thought that various people in the school had contributed and that the Project had made some contributions. A parent commented that she felt her son had benefitted; that he was calmer and thinking more purposefully about his work. Another parent commented that it would be good to have a workshop for parents of children in the project.

Review of new instruments

Due to the lateness of the hour, Professor Grannis explained that there were two new instruments that Project staff would like to give to the students. He passed out the instruments for members to read. It was agreed that the Committee would meet again next Wednesday, October 24 at 3:00 PM to discuss them further.

The meeting closed with the comment by one member that the Project had done a lot of good things for the school.

10/17/84

APPENDIX B

PROJECT ON ACADEMIC STRIVING

To: The Teacher Planning Team/Human Rights Committee

From: Professor Joseph Grannis
Mary Ellen Fahs

Attached are the corrected minutes of the Teacher Planning Team's meeting of October 3, 1984. They have been rewritten following a discussion in the Human Rights Committee which monitors the workings of the Project on Academic Striving to assure that the rights of children, parents and school staff are protected. We apologize for the wording in the previous minutes.

Following the discussion at the Human Rights Committee, we have decided in the future that no members of the school community will be named in the minutes but only identified as "a teacher" or "a staff member" or "a parent." We believe that in this way the confidentiality and dignity of all persons in the school will be preserved. If anyone has any questions or further suggestions, please feel free to speak with us.

October 23, 1984

PROJECT ON ACADEMIC STRIVING

Corrected Minutes: Teacher Planning Team Meeting, October 3, 1984

Present:

Names deleted to preserve confidentiality.

Professor Grannis opened the meeting by saying that Project staff had visited two seventh grade classes during group guidance period to explain the project and give permission slips to new students. Staff hopes to be able to visit other 7th and 8th grade classes in the next week or so. Several teachers responded that such visits would be possible either during group guidance or periods in which they had their official classes. It was agreed that the scheduling would be arranged later.

Professor Grannis then resumed the discussion begun last week regarding giving students extra help in thinking of career choices and completing high school applications. A teacher commented that a big problem is that students don't have goals for themselves or ideas about what they might like to be. The other teachers agreed and said that it would be important to talk with 7th and 8th graders about a variety of careers so that the students' perceptions of their possibilities could be broadened. Another teacher commented that this would be important for 8th graders even after applications were filed. It was noted that many students would end up in zoned high schools but if they had some career goals in mind when they went they would have more incentive to stay in school and make the most of their high school experience.

Project staff then described three worksheets that could be used for general career discussions or for discussions to facilitate high school choices. A teacher said that she was eager to begin using them for general discussions in her 7th grade class. It was noted that there was not much time left to help 8th graders. It was generally agreed that official teachers would try to help students understand how to use the Board of Education's booklet on high school admissions on Tuesday and Wednesday. Then on Thurday, a teacher will use the work sheet, CAREER CHOICES/HIGH SCHOOL POSSIBILITIES, in her 8th grade classes. It was agreed that Kay Matthews would help her with this project.

Other ideas suggested by teachers to encourage students in both the 7th and 8th grades to think of a variety of careers were: getting special materials displayed in the library, showing students how to use The Dictionary of Occupational Titles to learn new vocabulary and understand what different careers are all about, and inviting people from different professions to visit the school.

APPENDIX B

* Next meeting - Wed Nov 7 3PM

PROJECT ON ACADEMIC STRIVING

Minutes: Human Rights Committee Meeting, October 24, 1984

Present: Names deleted to preserve confidentiality.

Mrs. Fahs welcomed the committee members. A teacher made the suggestion that it would be good for students to learn about their future roles as citizens by engaging in a voter registration and mock election in school. Professor Grannis suggested that this would be a good activity for a Student Council to take on.

Mrs. Fahs then asked Professor Grannis to explain the two new questionnaires the Project would like to give to the students this year. He noted that from comparing the findings from the Academic Environment Inventory which gives an indication of students' perceptions of stressing events and supportive events with students' grades, the Project has found that those students who perceive more stress have lower achievement in most cases. There are some students, however, who manage to cope with stress better than others. The first questionnaire (which is actually called The Academic Coping Inventory) would be used to get a clearer picture of what students say, think and do in response to an upsetting academic event such as not doing well on a test or not being able to answer a question in class. The purpose of such a questionnaire is to see whether and how the responses of achieving students are different from those of less successful students so that the latter may be helped to cope better. A teacher suggested that in the future the purpose and explanation about the questionnaire should accompany it so that it can be reviewed with those details in mind. Another teacher suggested that the wording of the introductory statement should be changed. A parent suggested, and everyone agreed, that the first item should be relocated. It was also agreed that the questionnaire should have a name; " How I React" was suggested.

A parent asked whether the data being gathered by the Project was being used to measure the students, the teachers or the school. Professor Grannis explained that the Academic Environment Inventory is being used at different times to see if there are changes in the levels of stress students experience and what can be done to improve their abilities to cope with upsetting events and to improve the environment at the school. At present, we only planned to give the coping questionnaire once in order to help understand how different children deal with academic stressors and what can be done to improve some children's abilities to cope with stress. Another parent suggested that it would be better to ask the students why they feel certain ways instead of just checking whether something is "true" or "not at all true" for them. Mrs. Fahs agreed that this was important and said that Project staff had been considering talking to the Committee about doing this through interviews as had been done in the planning phase of the project.

A teacher and a parent both indicated that they needed a better understanding of the purpose of the questionnaire and the use of the findings. Professor Grannis and Mrs. Fahs agreed that the questionnaire would be redone as recommended and that a brief statement about its purpose and use would be written.

Professor Grannis then turned to the second questionnaire (Why Things Happen) which focuses on what students feel about the causes of things that happen and how much in control of events they feel. This questionnaire is much like others that have been used in the project (The Nowicki-Strickland Locus of Control Scale for Children) but has questions that differentiate between physical, academic, social and general areas. Professor Grannis explained that generally people fare better when they feel more in control of at least some aspects of their lives. It has been noted in other studies that boys who do not believe they have control over things happening to them are particularly at risk in school compared to girls. The children at I.S.# appear to follow this pattern.

A new parent then asked whether there had been any reports on the findings of the project. Professor Grannis replied that there had been a report done in the summer of 1983 which had been shared with the Committee and that the next report to the W. T. Grant Foundation was due in February, 1985. It was agreed that the new parents would be given copies of all the minutes and reports of the work of the Project to date. Mrs. Fahs also said that she would review the file in the library to make sure that it was complete.

It was generally agreed that everyone on the committee needed more time to review the questionnaires. In response to several questions, Professor Grannis explained that all the information on individual children is confidential and shared with no one in the school or elsewhere. General information such as those aspects of school life which many children find stressful is discussed with school personnel in order to find ways to improve the climate for learning.

The Committee will meet again on Wednesday, November 7 at 3:00 PM.

10/24/84

APPENDIX B

PROJECT ON ACADEMIC STRIVING

Minutes of the Human Rights Committee Meeting, Wednesday, November 7, 1984

Present:
Names deleted to preserve confidentiality.

Professor Grannis reviewed the memorandum which had been prepared to describe the purpose of the Academic Coping Inventory called How I React. (See attached for those who were not present). A teacher then seriously questioned item #16, saying that she thought it was not appropriate to ask children to say that (I feel really stupid); that too often black people have been called stupid. Professor Grannis said he was sensitive to her concerns but the questionnaire was designed to help identify children who had that negative feelings about themselves so that they could be helped. He added that many children, including his own son, sometimes have this feeling about themselves. Other committee members argued that children not only think this way but also call each other stupid. Several other possible wordings including "I don't feel real smart" and "I'm not at all smart" were suggested. Mrs. Fahs concluded that it might be better simply to eliminate that item from the questionnaire, if it was still considered offensive by anyone. The Academic Coping Inventory was then approved for use in the project on the condition that item #16 would be reworded or eliminated.

Professor Grannis then distributed a description of the questionnaire, Why Things Happen, and its purposes. He said that this was not the first time we have tried to understand students' beliefs about the sources of their successes and failures. He indicated that these beliefs can be different in relation to home, sports and school and can help project staff understand how students can be supported to believe they can be successful in school. After some discussion, the Committee approved the use of Why Things Happen.

Professor Grannis then explained that project staff would be giving 7th and 8th grade students the Academic Environment Inventory in the next couple of weeks. He reminded the committee that this questionnaire had been created at the school from discussions of stressful and supportive events with the students. Besides being given here, the questionnaire was also given at a mid-Manhattan private school. Analysis of students' responses indicates that responses follow similar patterns in both schools; children at both schools feel similarly about stressful and supportive events in school. In other words, this questionnaire developed to help project staff reduce stress and promote support for students at this school can be used to benefit children in other school environments.

A teacher then asked whether the work of the project will show up in children's academic progress. Professor Grannis replied that our project was just part of what was going on at the school and that as the whole school environment changes, we will see changes. He explained further that project staff is seeing some changes in individual children and is working particularly with some children who are especially stressed. There have been some consultations with these children's parents as well. Professor Grannis responded to a parent's question about whether questionnaires could be taken home so that parents could see how children responded to them that that would not maintain confidentiality. Mrs. Fahs suggested that a workshop for parents could discuss the general findings of the questionnaires and how the parents could support their children's academic striving. The parents again expressed agreement that this should be done suggesting the upcoming open school night as a good time. Professor Grannis said that a proper workshop could not be organized that quickly but one would be held as soon as possible.

Mrs. Fahs thanked the committee members for their thoughtful consideration of the questionnaires and for their support. The meeting was adjourned at 4:15 PM.

11/7/84

APPENDIX B

PROJECT ON ACADEMIC STRIVING

Minutes: Human Rights Committee Meeting, March 6, 1985

Present:

Names deleted to preserve confidentiality.

Cooperative Learning Workshop

Professor Grannis opened the meeting by commenting on the workshop on Cooperative Learning. He said that Ms. Bennett had very much enjoyed working with the staff of I.S. #   and that several teachers have already started using some of the techniques. At the project's Teacher Planning Team meeting, teachers have been sharing ideas and talking about ways of rewarding the winning student teams, such as putting photos of the winning teams on the bulletin board, writing articles on the teams in the student newsletter. He indicated that Ms. Bennett would come back to visit classes where teachers were trying cooperative learning methods. There was general agreement that the workshop had been interesting and beneficial. One teacher commented that it was the best thing that the project had done for the school.

Project Activities

Next Professor Grannis described the project's current activities, indicating that project staff are administering various questionnaires to the students in the project as well as conducting group activities. Half of each session with the students is devoted to activities which try to promote positive feelings about themselves, the ability to work together, to develop critical thinking skills and the ability to express themselves in front of other students. A teacher commented that she was pleased to hear the project was engaging the students in this kind of activity. A parent commented that the students need to be aware that they don't do all things totally on their own, that God and other persons support them. Professor Grannis said that many students were very aware of their parents' support. A teacher commented that respect for morality and learning were not as important as underpinnings of society as in the past, qualities that were good training for getting a job. Another teacher indicated that students these days don't get the group activities they need like Boy Scouts and extracurricular programs. There were other comments to the effect that students who do things such as using curse words should be corrected immediately so that they learn they can't get away with it.

Review of the Coping Interview

The Coping Interview which had been distributed to the committee members was then discussed. Professor Grannis indicated that following up on comments from the last meeting, project staff were interested in asking students more about their thinking in relation to stressful events. After considerable discussion about #2. in the checklist ("I say other students will think I'm dumb"), it was agreed that this item be eliminated. It was also agreed that if students indicate that "I say I'm just no good",project staff should ask what they mean and reassure the students. Professor Grannis and Mrs. Fahs agreed that that was important and that project staff constantly tries to encourage and support students.

Additions to Academic Environment Inventory

Professor Grannis then distributed several sentences that the project would like to add to the Academic Environment Inventory. Members of the committee requested that the purpose of these additions be sent to them in writing along with a copy of the current version. Professor Grannis agreed to do this.

The next meeting of the Committee was scheduled for Wednesday, March 27th at 3:00 PM.

3/6/85

APPENDIX B

PROJECT ON ACADEMIC STRIVING

Minutes: Human Rights Committee Meeting, March 27, 1985

Present:

Names deleted to preserve confidentiality.

As members of the committee were gathering, there was an informal discussion about the assembly program that had taken place in the morning. The assembly was conducted by two police officers who were discussing the dangers of alcohol and drugs. The officers seemed annoyed that many of the students were talking and not paying attention. In fairness to the students several teachers commented that they thought the movie sound track had been very difficult to hear and that the type of discussion was more suitable to small groups than a large assembly. Mrs. Fahs said that she had had some of the same reactions and, in fact, had been concerned about some of the specific things the officers had said, particularly about teen-age suicide.

There was then a brief discussion of the lateness detention program and how it seemed to be meeting with some success, that very few children were now arriving late for school. It was suggested that such a program might be instituted at the beginning of school next year.

Professor Grannis then described some of the results that the project is finding from the administration of Things That Happen in School, the questionnaire that asks students how they feel about stressor and support events in school and how often they see these events happening. He commented that the students' responses to this questionnaire are as good a predictor of their grades as their reading scores. In other words, two kids with the same reading scores can be getting very different grades and their responses to the stressor events are also different. He also said that the project's findings indicate that how the boys, particularly, deal with stressor events has to do with whether they feel in control of themselves. In this connection, project staff would like to be able to ask the students more open-ended questions about their perception of the causes for things that happen in their lives.

Review of the Locus of Causality Interview

Professor Grannis then referred to the Locus of Causality Interview which had been distributed to the committee members for their consideration. He explained that talking with the students about "how come" certain events happen will help staff members to help students have more successes and a better understanding of some of their unsuccesses without blaming themselves or others. He indicated that the interview questions are asked with "how come" instead of "why", because "why" often gives others the feeling of being disapproved.

As part of the discussion by the committee members of the value of such an interview, several suggestions were made by members. It was suggested that at the end of the intervew, project staff should review with the student the things he/she can influence or control as well as asking something like, "What would you do to have it come out differently?" Also, if a student feels that he or she can not do anything about a situation and has no ideas about it, the interviewer should be encouraging and make a few suggestions. In other words,it was felt that the interview should also be educational and therapeutic. It was further suggested that these questions could also be used for group discussions. Several members said that they would be interested in hearing tapes of some of the project's group discussions. Professor Grannis and Mrs. Fahs both indicated that they thought the suggestions were very helpful and that it would be possible to listen to some tapes of group discussions though they were often hard to hear. Mrs. Fahs suggested that project staff could come to meet with the classes of members of the committee so that they could see how such discussions go and participate in them as well. Following a question of what would happen to the interview responses, Professor Grannis explained that they would be taped and analyzed for their different meanings. Several members asked that the committee be given a report of this analysis.

The interview was then approved with the understanding that there would be a report of the analysis of the responses and that following each interview there would be a review of the responses with each student, as discussed above.

Additions to the Academic Environment Inventory

Professor Grannis then explained that the project had expected that support events would moderate the effects of stressor events but that the findings so far do not show this. He indicated that this may be because some important kinds of support events, like having an adult or student in school to talk to or count on for help, have not been included. He then referred to the six statements that were circulated to the members (four support events and two stressor events). After a brief discussion, the members approved adding the six statements to the AEI.

Project Activities

Professor Grannis then said that he would like to speak briefly about some of the project's activities. He said that one of the things that had been somewhat difficult for the project was that all the group guidance periods were at the same time. This scheduling makes it difficult for project staff to help teachers with group guidance activities, thereby reducing the project's potential effectiveness. Teachers commented that the scheduling was done in this way so that 7th and 8th graders could have assemblies together. Professor Grannis also indicated that project staff were interested in being as supportive as possible in the school's effort to use Cooperative Learning more widely and that Mrs.   was sending a memo asking which teachers would like to have Ms. Bennett come back to work with them. He said he felt that use of Cooperative Learning would need top-down support, not just from Mrs.   but also from the Assistant Principal and other administrators. He asked the committee for its support. There were individual comments of support as well as a question of what kind of support the project expected from the Human Rights Committee. Professor Grannis then indicated that a parent had suggested to him that there should be a meeting of all the outside groups and committees working in the school so that their agendas and goals could be shared. In this way a much larger

3/27/85

group of school staff members would know about what efforts were being made; and more support and cooperation could be engendered. There was general agreement that this would be a good idea.

Mrs. Fahs thanked the committee members for their helpful review of the project's instruments and activities. The meeting was adjourned at 5:00PM.

3/27/85

APPENDIX B

PROJECT ON ACADEMIC STRIVING

Minutes: Human Rights Committee Meeting, November 13, 1985

Present: Names deleted to preserve confidentiality.

Mrs. Fahs welcomed all the members of the Committee and introduced the new members. Professor Grannis then introduced the new project counselor, Russell Gross and gave the committee some background information which included teaching social studies in a junior high school and counseling experience. One of the teachers raised the question of whether a white counselor would be effective with the children. Professor Grannis indicated that the counselor who was supposed to continue from last year had notified him on the day before school started that she had taken another job and that he and Mrs. Fahs had posted notices stating that the job was available at New York University and Teachers College. Of the several people that applied, Mr. Gross seemed to them to be the best qualified. The P.A. President said that he had seen the project counselor working with students and that he considered him very effective and sensitive to their needs; at the same time, however, he expressed concern at the implication that there were no qualified black counselors. Professor Grannis explained that he had not intended to make that implication, only that the counselor selected seemed to be the best qualified of the few who applied within about a weeks' time. He agreed that if more time had been allowed for recruiting there would have been the possibility of hiring a black counselor. Another parent expressed concern that some felt that only black staff could help black students, feeling that blacks and whites need to learn to help each other and know each other. A third parent said that sometimes it was hard to get black professionals to come back to work in a school in their home neighborhood. Later in the meeting, the P. A. President explained his feelings of anger at any suggestion of discrimination stemming from some very painful experiences during the Civil Rights movement; Professor Grannis said that he could certainly understand these feelings and accepted the statement was making. Both agreed that the project could continue to work productively in the school for the benefit of students and staff.

Current Project Activities

Professor Grannis then described the project's current activities which have included meeting particularly with the 8th grade classes to discuss students' career goals as part of the process of high school applications. The project is concentrating on the 8th grade this year, the last year, of the project because that is where most of the project students are. He also explained that project staff, particularly the new counselor who is at the school three days a week, are meeting with individual students who come to the office to discuss problems or who are referred by their teachers. Lunch meetings with teachers are also continuing with the primary topics being curriculum ideas for group guidance periods.

Future Activities

Professor Grannis then outlined the activities which project staff plan to engage in for the rest of the year. He said that staff would like to support the school's efforts to use cooperative learning in subject classes. He explained that the project was funding the attendance of two teachers at a Math Cooperative Learning Workshop at Johns Hopkins University in Baltimore. He said that the project would also support and facilitate any school follow-up on the workshops relating to the Code of Conduct and suggested that such follow-up might include another workshop on school discipline and classroom management.

He also explained that the project is planning to give the questionnaires relating to stressful and support events in the school, The Academic Environment Inventory, to the classes with project students (all the 8th grade and several 7th grade classes) in early December. He distributed the revised AEI which had been approved last spring for the committee members' information. There was some discussion about whether to give the AEI only to project students or to all the students in the class. Committee members agreed that all students in a class should participate (those who are not project members will take the questionnaire anonymously). It was also agreed that classes with project students in the Academy upstairs should be included. Professor Grannis then distributed a questionnaire called Self-Report which asks students about health items such as headaches and stomach aches. He explained that such symptoms are often the outcome of stress and will give more information about how students may be helped. A parent said she thought this was a good idea as this period of puberty was a very stressful one for students because of changing biology and emotions; she felt that parents and teachers often do not take into account the mood swings of children of this age. After review of the questions on the Self-Report, the Committee approved giving the Self-Report to the classes at the same time as the Academic Environment Inventory.

Mrs. Fahs then explained that the project would like to make contact with students who were in the 8th grade last year. She said that this might be done some day after school and asked the Committee members' opinion of this idea. Everyone felt that it was a good idea.

Mrs. then described a new program for older students, The Charles Rangel Academy, which she hopes to establish in early December. She also announced that Parents Night would be November 21.

Mrs. Fahs then thanked the Committee members for their valuable input and the meeting was adjourned at 5:00 PM.

11/13/85

APPENDIX B

PROJECT ON ACADEMIC STRIVING

MINUTES OF THE HUMAN RIGHTS COMMITTEE Meeting, Wednesday, April 23, 1986

Present:

Names deleted to preserve confidentiality.

Review of Project Activities

After Mrs. Fahs welcomed the committee members, Professor Grannis described the various activities of the project over the previous months. These activities included:

1) Working with the 8th grade classes to share feedback on the students' responses to the Academic Environment Inventory. Samples of the worksheet with the students' reponses on a graph and questions for the students to answer (in a cooperative learning mode) were distributed to committee members. The object of the exercise was to discuss stressful events and to learn how to interpret and make graphs.

2) Worked jointly with the school administration and the School Site Management Committee to organize a workshop on school climate and discipline.

3) Met weekly with four to six interested teachers to discuss group guidance activities and individual students' needs. Professor Grannis distributed a form for use in problem-solving about discipline problems (Discipline Improvement Worksheet) which the teachers may use with individuals or for role playing in class. A committee member suggested making a form on "how to stay out of trouble."

4) Individual counseling and tutoring of students recommended to the project by teachers or students who referred themselves. Professor Grannis explained that five of his graduate students were also working with some students, one or two at a time, on career exploration. The purpose is both to give a service to students in the school and to provide an opportunity for graduate students to interact with adolescents. Mrs. Fahs explained that the project staff members are very mindful of the students' need to be in class and that students' appointments are limited.

Mrs. thanked Professor Grannis for the contributions of the project, saying that it has helped staff, teachers and students.

Future Activities

Mrs. Fahs distributed a plan for interviewing project students about how they are coping with stressful events, what they feel they have gained from junior high school and their anticipations about high school as well as the Academic Coping Inventory which was approved last year and which the project would like to give again. The purpose will be to see how students have progressed and to give them an opportunity to talk about any fears or problems they have about high school. There was some discussion about the fact that many students, especially special education students, are fearful about high school and that reassurance is very important. The interview format and the ACI were approved by the Committee.

Professor Grannis and Mrs. Fahs then described the plans for a 9th Grade Reunion on May 7th, which had been approved in principle at the last meeting. They distributed a sample information sheet, a short form of the Academic Environment Inventory, and the self-report distress questionnaire which they would like to ask the students to fill out. Professor Grannis explained that it is of interest whether students' experience of stress in high school is any different than in junior high. The Committee gave approval to all the proposed questionnaires and made the following suggestions: that pictures should be taken and that students should be asked what could have helped them to be better prepared for high school and what did help them. Mrs. Fahs explained that the letter inviting the students would tell them about the questionnaires and would offer them a stipend of five dollars for their participation in the meeting.

Professor Grannis then explained that the project had been doing some videotaping of students both as a way of letting them see themselves engaging in the kind of behavior that needs to be changed and to record some of their talent (role playing, rapping, singing). The students like being taped and it has been a useful didactic tool.

In response to a question about what the project is finding, Professor Grannis stated briefly that students' experience of stressful events was strongly related to their feelings of physical symptoms such as headaches and stomach aches. One of the parents reiterated that this period of early adolescents in which there is so much physical and emotional change is an extremely difficult and stressful one for many students.

Finally, Mrs. Fahs asked the committee whether they would approve the project's asking permission from the parents of 8th grade students in the project to conduct follow-up interviews with students during their high school years and the opportunity to talk with project staff on the phone. She explained that she had sounded out several parents of current students and that they had been receptive. The committee agreed that such a follow-up could be very helpful to many students and approved the request to contact parents.

Professor Grannis and Mrs. Fahs then thanked committee members for their input and support. The meeting was adjourned at 4:30 PM.

4/23/86

APPENDIX C

NEW INSTRUMENTS AND RESEARCH PROTOCOLS: 1984-85 and 1985-86 SCHOOL YEARS

Appendix C-1

Code____________________

Class____________________

Date____________________

HOW I REACT

Tero & Connell, 1984

Appendix C-1 cont.

HOW I REACT

INSTRUCTIONS:

Think of the last time something upsetting happened to you in school (like not doing very well on a test or not being able to answer a question in class). Students think, say and do different things when something like this happens to them.

Here are some things that students have told us they think and do after something upsetting happens to them in school. Tell us how true the following things are for you. Underline your answer.

FOR EXAMPLE: When something upsetting happens to me in school, I go out and climb a tree.

Your answer: Very true Sort of true Not very true Not at all true

This was just a practice question. Now we are going to begin. Remember, there are not right or wrong answers.

. . . .

When something upsetting happens to me like not doing well on a test:

1. I try to see what I did wrong.

Very true Sort of true Not very true Not at all true

2. I say that the test was unfair.

Very true Sort of true Not very true Not at all true

3. I tell myself it didn't matter.

Very true Sort of true Not very true Not at all true

4. I try to find out what I did wrong, so that it won't happen again.

Very true Sort of true Not very true Not at all true

5. I worry that the other students will think I'm dumb.

Very true Sort of true Not very true Not at all true

6. I say the teacher didn't cover the things on the test.

Very true Sort of true Not very true Not at all true

Appendix C-1 cont.

When something upsetting happens to me like not doing well on a test:

7. I tell myself I'll do better next time.

Very true Sort of true Not very true Not at all true

8. I try to forget about it.

Very true Sort of true Not very true Not at all true

9. I feel really mad at myself.

Very true Sort of true Not very true Not at all true

10. I try not to look at the test.

Very true Sort of true Not very true Not at all true

11. I tell myself I'll have another chance.

Very true Sort of true Not very true Not at all true

12. I worry whether it will happen again.

Very true Sort of true Not very true Not at all true

13. I get angry at the teacher.

Very true Sort of true Not very true Not at all true

14. I feel really terrible.

Very true Sort of true Not very true Not at all true

15. I don't think about it.

Very true Sort of true Not very true Not at all true

16. I get really mad at other people.

Very true Sort of true Not very true Not at all true

17. I just feel bad about it.

Very true Sort of true Not very true Not at all true

18. I ask the teacher for help with the material.

Very true Sort of true Not very true Not at all true

APPENDIX C-2a

COPING INTERVIEW (FINAL VERSION)

Hello, I would like to ask you about things that you find upsetting in school.

1. As you think of your day, from the time you come to the time you leave, is there anything upsetting?
   (Allow students to talk about as many incidents as they wish).

2. Last fall, we asked students to comment on upsetting events in a questionnaire. I would like to talk to you about some of these events. Not all students feel exactly the same so I'm interested in your thoughts.

Academic:

You did not do well on a test or you did worse than you should have.

You could not answer a question in class.

You were warned you might not pass a subject or pass to the next grade.

3. Which of these is most upsetting to you? Why?

4. Sometimes people talk to themselves or give themselves directions when something like that happens. Did you say anything to yourself or think anything to yourself when that first happened?

5. What did you do about (the event)?

6. O.K. Let's think again about that situation: a) Did you think you could change it or do something about it? b) Or was it one that you had to get used to (accept)? c) Or didn't think anything about?

Social:

Someone hit you or messed with you.

Someone tried to copy your work when you didn't want them to.

People in the classroom wouldn't get quiet.

(Repeat questions 3 - 6)

O.K. Thanks a lot for talking with me so frankly today. Is there anything that you would like to ask me?

Appendix C-2b

Code ______________

Class ______________

Date ______________

WHAT STUDENTS SAY TO THEMSELVES

Now we are going to review these events once more. Let's think of ____ ____(name upsetting event). I am going to read some things that kids say to themselves and I'd like you to tell me if you said anything like that. (There will be some things that you wouldn't say).

	Hardly ever	Sometimes	Often
1. I try to find out what I did wrong.	___	___	___
2. I hope some miracle will happen.	___	___	___
3. I say it didn't matter.	___	___	___
4. I say that test (person) was not fair.	___	___	___
5. I say just forget it, there's nothing I can do about it.	___	___	___
6. I say I'm really mad at the others.	___	___	___
7. I say there's no point in trying, everyone is against me.	___	___	___
8. I daydream or imagine a nicer place to be in.	___	___	___
9. I say I'm going to ask someone for help.	___	___	___
10. I say I'm just no good.	___	___	___
11.I'll keep trying even though it's hard.	___	___	___
12. I say I'm as good as anyone.	___	___	___
13. I make a promise to myself that I will study harder (do things differently) next time.	___	___	___
14. I just don't say anything to myself.	___	___	___

Appendix C-3a

WHY THINGS HAPPEN

The questionnaire, Why Things Happen, is an inventory to find out children's beliefs about the sources of their successes or failures. Those sources can be self (internal), someone else (a powerful other), or unknown. At the same time, this inventory asks the child to indicate in what areas he or she experiences those feelings of success or failure, such as the social #4 and #19, the physical #9 and #33, the cognitive (school) #7 and #27, or the general #2 and #41.

Therefore, three peices of information are shown in each item: 1) whether the child believes he or she is successful or not, 2) to what source the child attributes his or her success or failure, and 3) in which area he or she experiences those successful or unsuccessful experiences.

Some people such as researchers who are interested in how children learn in school have found that children's beliefs about the sources and areas of children's successes and failures are related to children's achievement in school and in other areas of their lives.

Some times children who feel they are not the source of success or failure in other areas of their lives still can believe they are the source in school. Finding different patterns of relationship between children's beliefs and their real success in school will suggest ways to improve the learning environment for all children.

Appendix C-3b

Why Things Happen

J. P. Connell (1980), *A new multidimensional measure of children's perceptions of control*. University of Rochester.

Appendix C-3b cont.

Why Things Happen

Name ______________________ Age ______ Birthday (Month) ______ (Day) ______

Grade ___ Teacher ______________ School ________________ Boy or Girl (Circle one

Sample Questions

(a) I like chocolate ice cream better than vanilla ice cream

very true   sort of true   not very true   not at all true

(b) I really like spinach

very true   sort of true   not very true   not at all true

---

1. When I win at a sport, a lot of times I can't figure out why I won.

very true   sort of true   not very true   not at all true

2. When I am unsuccessful, it is usually my own fault.

very true   sort of true   not very true   not at all true

3. The best way for me to get good grades is to get the teacher to like me.

very true   sort of true   not very true   not at all true

4. If somebody doesn't like me, I usually can't figure out why.

very true   sort of true   not very true   not at all true

5. I can be good at any sport if I try hard enough.

very true   sort of true   not very true   not at all true

6. If an adult doesn't want me to do something I want to do, I probably won't be able to do it.

very true   sort of true   not very true   not at all true

Appendix C-3b cont.

7. When I do well in school, I usually can't figure out why.

very true   sort of true   not very true   not at all true

8. If somebody doesn't like me, it's usually because of something I did.

very true   sort of true   not very true   not at all true

9. When I win at a sport, it's usually because the person I was playing against played badly.

very true   sort of true   not very true   not at all true

10. When something goes wrong for me, I usually can't figure out why it happened.

very true   sort of true   not very true   not at all true

11. If I want to do well in school, it's up to me to do it.

very true   sort of true   not very true   not at all true

12. If my teacher doesn't like me, I probably won't be very popular with my classmates.

very true   sort of true   not very true   not at all true

13. Many times I can't figure out why good things happen to me.

very true   sort of true   not very true   not at all true

14. If I don't do well in school, it's my own fault.

very true   sort of true   not very true   not at all true

15. If I want to be an important member of my class, I have to get the popular kids to like me.

very true   sort of true   not very true   not at all true

16. Most of the time when I lose a game in athletics, I can't figure out why I lost.

very true   sort of true   not very true   not at all true

17. I can pretty much control what will happen in my life.

very true sort of true not very true not at all true

18. If I have a bad teacher, I won't do well in school.

very true sort of true not very true not at all true

19. A lot of times I don't know why people like me.

very true sort of true not very true not at all true

20. If I try to catch a ball, and I don't, it is usually because I didn't try hard enough.

very true sort of true not very true not at all true

21. If there is something that I want to get, I usually have to please the people in charge to get it

very true sort of true not very true not at all true

22. If I get a bad grade in school, I usually don't understand why I got it.

very true sort of true not very true not at all true

23. If somebody likes me, it is usually because of the way that I treat them.

very true sort of true not very true not at all true

24. When I lose in an outdoor game, it is usually because the kid I played against was much better at that game to begin with.

very true sort of true not very true not at all true

Why Things Happen

Name ______________________ Age _______ Birthday (Month) _______ (Day) _______

Grade ___ Teacher ________________ School ____________________ Boy or Girl (Circl one

25. When I win at an outdoor game, a lot of times I don't know why I won.

very true sort of true not very true not at all true

26. When I don't do well at something, it is usually my own fault.

very true sort of true not very true not at all true

27. When I do well in school, it's because the teacher likes me.

very true sort of true not very true not at all true

28. When another kid doesn't like me, I usually don't know why.

very true sort of true not very true not at all true

29. I can be good at any sport if I work on it hard enough.

very true sort of true not very true not at all true

30. I don't have much of a chance of doing what I want if adults don't want me to do it.

very true sort of true not very true not at all true

31. When I get a good grade in school, I usually don't understand why I did so well.

very true sort of true not very true not at all true

32. If someone is mean to me, it is usually because of something I did.

very true sort of true not very true not at all true

33. When I play an outdoor game against another kid, and I win, it's probably because the other kid didn't play well.

very true   sort of true   not very true   not at all true

34. A lot of times, I don't know why something goes wrong for me.

very true   sort of true   not very true   not at all true

35. If I want to get good grades in school, it's up to me to do it.

very true   sort of true   not very true   not at all true

36. If the teacher doesn't like me, I probably won't have many friends in that class.

very true   sort of true   not very true   not at all true

37. When good things happen to me, many times there doesn't seem to be any reason why.

very true   sort of true   not very true   not at all true

38. If I get bad grades, it's my own fault.

very true   sort of true   not very true   not at all true

39. If I want my classmates to think that I am an important person, I have to be friends with the really popular kids.

very true   sort of true   not very true   not at all true

40. When I don't win at an outdoor game, most of the time I can't figure out why.

very true   sort of true   not very true   not at all true

41. I can pretty much decide what will happen in my life.

very true   sort of true   not very true   not at all true

42. If I don't have a good teacher, I won't do well in school.

very true sort of true not very true not at all true

43. A lot of times, there doesn't seem to be any reason why somebody likes me.

very true sort of true not very true not at all true

44. If I try to catch a ball and I miss it, it's usually because I didn't try hard enough.

very true sort of true not very true not at all true

45. To get what I want, I have to please the people in charge.

very true sort of true not very true not at all true

46. When I don't do well in school I usually can't figure out why.

very true sort of true not very true not at all true

47. If somebody is my friend, it is usually because of the way that I treat them.

very true sort of true not very true not at all true

48. When I don't win at an outdoor game, the person I was playing against was probably a lot better than I was.

very true sort of true not very true not at all true

Appendix C-4

Locus of Causality

Interview

March 27,1985

We are trying to find out what students believe about the causes for things that happen in areas of their lives. The student's perceptions or beliefs about "how come" certain events happen will help us to help them have more successes in some areas and a wider understanding for some of their unsuccesses without blaming themselves or others.

The areas to be considered in this interview are school, social, and physical. All responses will be confidential and only students with signed permission will be interviewed.

School

1.We all experience not completing assignments. Tell me now come you can not complete an assignment.

2. Sometimes we complete an assignment. Tell me how come you can complete an assignment.

Social

1. We all want people to like us. Sometimes someone likes you. Tell me how come that person likes you.

2. Sometimes everyone does not like you. Tell me how come someone does not like you.

Physical

1. Sometimes you are successful at doing something like winning a game. Tell me how come you are successful at doing something.

2. Tell me how come you are not successful at winning a game.

Appendix C-5

Self-Report

Adapted from T. Langner (1962), A Twenty-two item screening score of psychiatric symptoms indicating impairment by Joseph C. Grannis and Mary Ellen Fahs for The Project on Academic Striving.

Appendix C-5 cont.

SELF-REPORT

Below is a list of feelings and complaints that students sometimes have. Read each one carefully. INDICATE HOW MUCH EACH ONE HAS HAPPENED TO YOU DURING THE PAST COUPLE OF WEEKS INCLUDING TODAY.

Circle one answer for each item.

HOW MUCH WERE YOU BOTHERED BY:	Not at all	Once or twice	Several times	Often
1. Headaches or pains in your head	1	2	3	4
2. Having trouble in getting to sleep or staying asleep	1	2	3	4
3. Stuffiness or fullness in your head or nose	1	2	3	4
4. Spells of worrying	1	2	3	4
5. Feeling blue	1	2	3	4
6. Feeling weak all over	1	2	3	4
7. Feeling like not eating	1	2	3	4
8. Dizzy or fainting spells	1	2	3	4
9. Heart beating too fast	1	2	3	4
10. Restlessness so you can't sit still in your chair	1	2	3	4
11. Feeling tense or keyed up or nervous	1	2	3	4
12. Wondering if anything is worthwhile anymore	1	2	3	4
13. Stomach aches	1	2	3	4
14. Feeling somewhat alone even when you are with friends	1	2	3	4
15. Feeling at times that you just can't get going	1	2	3	4

Appendix C-6

DRAFT

Spring Interview of 8th graders

I. Give the Academic Coping Inventory

II. Interview

1. Is there something (an event) that has been upsetting to you (or your classmates) during the last week or so?

How did you deal with it?

What did you say to yourself when it began to happen?

What did you do?

What happened?

Did you feel good/bad about the outcome?

2. Can you tell me about something (an event) that has made you feel good in the last week or so?

what happened?

Does that kind of thing happen often?

3. In all, looking back over this year, how have things gone for you?

4. Do you feel good about your education this year?

5. What do you think could make I.S. #10 better for kids next year?

6. Do you think you have changed in any way since you first came to I.S. #10?

7. What do you think may be hard to deal with in high school?

Why?

What could help you handle that?

Would you like to be able to talk with PAS staff?

(If student appears uncertain about handling difficulties at high school, offer some suggestions, e.g. talk to guidance counselor, teacher, etc.)

1986

Appendix C-7

PROJECT ON ACADEMIC STRIVING

Class of 1985 Reunion

______________________ name

______________ code

1. What high school did you enter in September? ______________________

Are you in a special program? __ no ___yes ______________________ (name)

2. Are you still attending? __ yes____no

3. How many days do you go to school each week? 5 4 3 2 1 (Circle one)

4. What were your most recent grades?
(List grades of all subjects)

______________ ______________ ______________

______________ ______________ ______________

5. Do you plan to go back to the same school next year? ___ yes___no

If yes, will you be in a special program? ___ no___ yes ______________________ (name)

If not, where do you plan to be? ______________________

6. If you are no longer attending school, when did you leave?

Sept Oct Nov Dec Jan Feb March April May (Circle one)

7. What was the reason for your leaving? ______________________

____

8. Are you working at a paid job? ____ full-time ____ part time__ not at all

THINGS THAT HAPPEN IN HIGH SCHOOL

In this questionnaire, a number of events that could or do happen in high schools are listed. We would like to know how you feel (or would feel) about the event if it happens and then we would like you to tell us how often it happened in the past week.

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

1) People in the hall were bothering the classroom.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

2) Someone helped me understand my school work.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

3) I could not finish my work in class.

A ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

4) Somebody treated me like I always do wrong.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

5) Someone tried to pressure me to cut class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

6) Somebody said something to cheer me up.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

7) I felt unsafe in the school.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

8) People in the classroom wouldn't get quiet.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

9) Somebody helped me think about a personal problem.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

10) Someone hit me, or kicked or pushed me.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

11) I got to be in a class or group with other students I like.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

12) Someone shouted or screamed at me.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

13) I didn't have a pen or paper or book to do my work in class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

14) Someone said I did something right.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___ hardly ever ___sometimes ___often

15) Someone was picking on me in the hall.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

16) I couldn't get an answer to a question I asked.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

17) I was bothered by people using drugs.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

18) I felt I did not have a good friend in the school.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

19) I was pressured to get into sex when I didn't want to.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

20) I helped a friend who had a problem.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

Appendix C-8

Revisions for the Academic Environment Inventory

(See attached copy of the AEI that has already been approved).

The AEI contains items relating to both stressful and supportive events in the school environment. You will recall that the project is finding that how students' react to stressful events and how often stressful events happen explains as much of the variation in their grades as their reading scores. From the findings so far, support events do not seem to be so important for the students' achievement. However, we think the support events scales of the AEI would be strengthened by adding the following items which are more like items in other social support scales that previous research has found to moderate stressful experience:

> There was was an adult at school who I could talk to about almost anything that was bothering me in school.
>
> There was a student at school who I could really count on for help when I needed it.
>
> There was an adult at home who I could talk to about almost anything that was bothering me in school.
>
> There was a sister or brother or cousin at home who I could count on for help when I needed it.

In addition, we propose to add the following stressor items to the questionnaire:

> Someone took something from me.
>
> People were throwing things and fighting in the lunchroom.

We believe these items will make the AEI an even stronger indicator of the stressors and supports found in the school environment.

AEI-6

Code____________________

Date____________________

Boy____ Girl____

Things That Happen In School

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Appendix C-8a cont.

Things That Happen In School

In this questionnaire, a number of events that could or do happen in schools are listed. We would like to know how you feel (or would feel) about the event if it happens and then we would like you to tell us if (and how often) it happened in the past week.

Example:

1. Someone said mean things to me.

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ____very good ___good ___made no difference ___upset ___very upse

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)

B. ____hardly ever ___sometimes ___often

2. Someone wrote me a friendly note.

A. ___very good ___good ___made no difference ___upset ___very upse

B. ___hardly ever ____sometimes ___often

AEI-6

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

1. There was a lot of cursing in class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

2. Someone helped me do something I needed to do.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

3. Someone tried to copy my work when I didn't want them to.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

4. People paid attention to something I said in class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

5. Someone hit me, or kicked or pushed me.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

6. There was a sister or brother or friend at home who I could count on for help when I needed it.

A. ___very good ___good ___made no difference ___ upset ___very upset

B. ___hardly ever ___sometimes ___ often

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

7. People in the classroom spoke respectfully to each other.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

8. I couldn't get an answer to a question I asked.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

9. I got to be in a class or group with other students I like.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

10. Somebody stuck up for me when I was getting picked on.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

11. People in the hall were bothering the classroom.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

12. Someone made fun of something I said in class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

13. There was an adult at school who I could talk to about almost anything that was bothering me in school.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

14. Somebody helped me do my homework.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

15. People in the classroom wouldn't get quiet.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

16. Someone helped me understand something.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

17. I was warned that I might not pass a subject or pass to the next grade.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

18. Someone said I did something right.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

19. I or one of my friends was moved to a different class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

20. Somebody said something to cheer me up.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

21. Someone shouted or screamed at me.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

22. There was a student at school who I could really count on for help when I needed it.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

23. Someone tried to pressure me to cut class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

24. I helped a friend who had a problem.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

25. I felt unsafe in the school.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

26. I could not finish my work in class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

27. Somebody helped me make up with a friend.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

28. Somebody treated me like I always do wrong.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

29. I didn't have a pen or paper or my book to do my work in class.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

30. Somebody helped me think about a personal problem.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

31. I did worse on a test than I should have.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

32. Somebody asked me to be his or her friend.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

33. Someone was picking on me in the hall.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

34. People acted in a way that let me know they understood me.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

35. There was a change of teachers in one (or more) of my classes.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

36. I did well on a test or a homework assignment.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

THINGS THAT HAPPEN IN SCHOOL

IF THIS HAPPENS TO YOU IN SCHOOL, HOW DO (OR WOULD) YOU FEEL ABOUT IT?

A. ___very good ___good ___made no difference ___upset ___very upset

DID THIS HAPPEN DURING THE PAST WEEK (OR SINCE THE BEGINNING OF LAST WEEK)?

B. ___hardly ever ___sometimes ___often

---

37. People were throwing things and fighting in the lunchroom.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

38. Someone gave me a hug or a pat on the back.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

39. Someone took something from me.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

40. There was an adult at home who I could talk to about almost anything that was bothering me in school.

A. ___very good ___good ___made no difference ___upset ___very upset

B. ___hardly ever ___sometimes ___often

Appendix C-9

Student name ____________ Class ________ Code ________ Teacher completing form ____________

Teacher Checklist of Student Behaviors *

	Almost Never	Sometimes	Often	Almost Always
1) During instruction, this student				
a. distracts certain other students				
b. gets distracted by other students				
c. joins in general class disruptions				
2) If another student wants to fight, this student				
a. gets into a fight				
b. defends him/herself verbally				
c. moves away from the situation				
d. comes to you/ another adult for help				
3) If this student does not do well on a classroom test, she/he				
a. asks you for explanation/other help				
b. studies harder for the next test				
c. acts as if it didn't matter				
d. gets mad at you or others				
e. seems to give up				
4) This student comes to class with				
a. paper and pencil				
b. appropriate textbook or other materials				
5) This student follows classroom rules and teacher requests				
6) This student pays attention to lessons and directions for assignments				
7) When this student has a homework assignment, he/she				
a. does it at home				
b. does it in school				
c. does it on his/her own				
d. completes the assignment				
e. does the assignment correctly				
8) This student acts as if she/he feels good about her/himself				
9) This student takes responsibility for his/her own actions				
10) In interaction with others, this student is				
a. considerate				
b. assertive				

THE MATERIAL ON THIS FORM WILL BE COMPLETELY CONFIDENTIAL. THE STUDENT'S NAME WILL BE ERASED AND HIS/HER CODE SUBSTITUTED. THIS INFORMATION WILL NOT BECOME PART OF THE STUDENT'S RECORD.

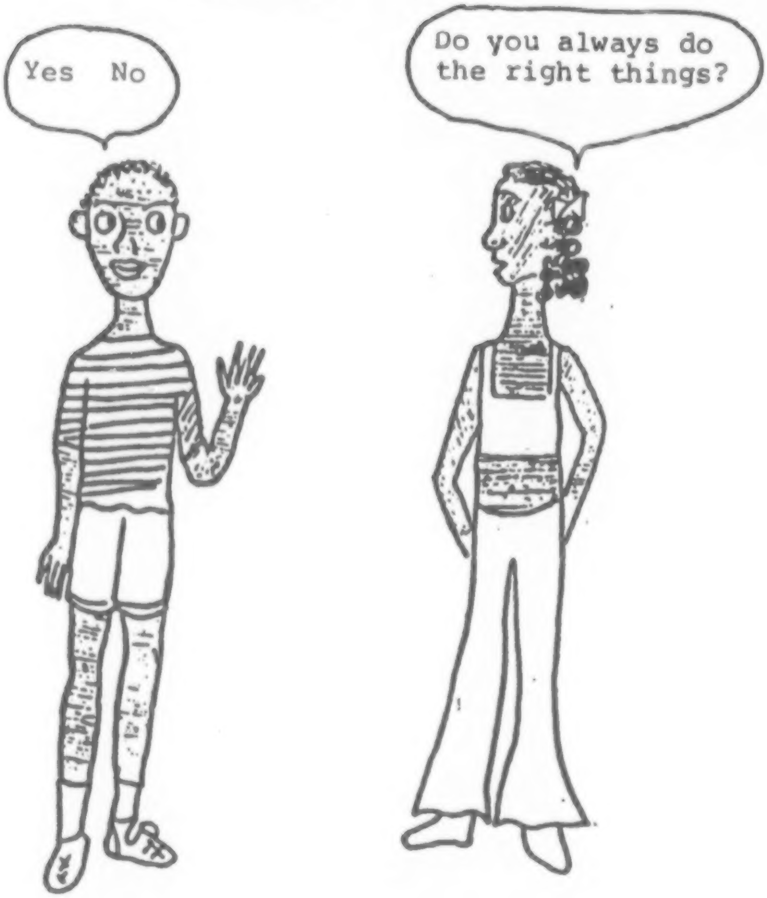
Appendix C-10

nslc-12

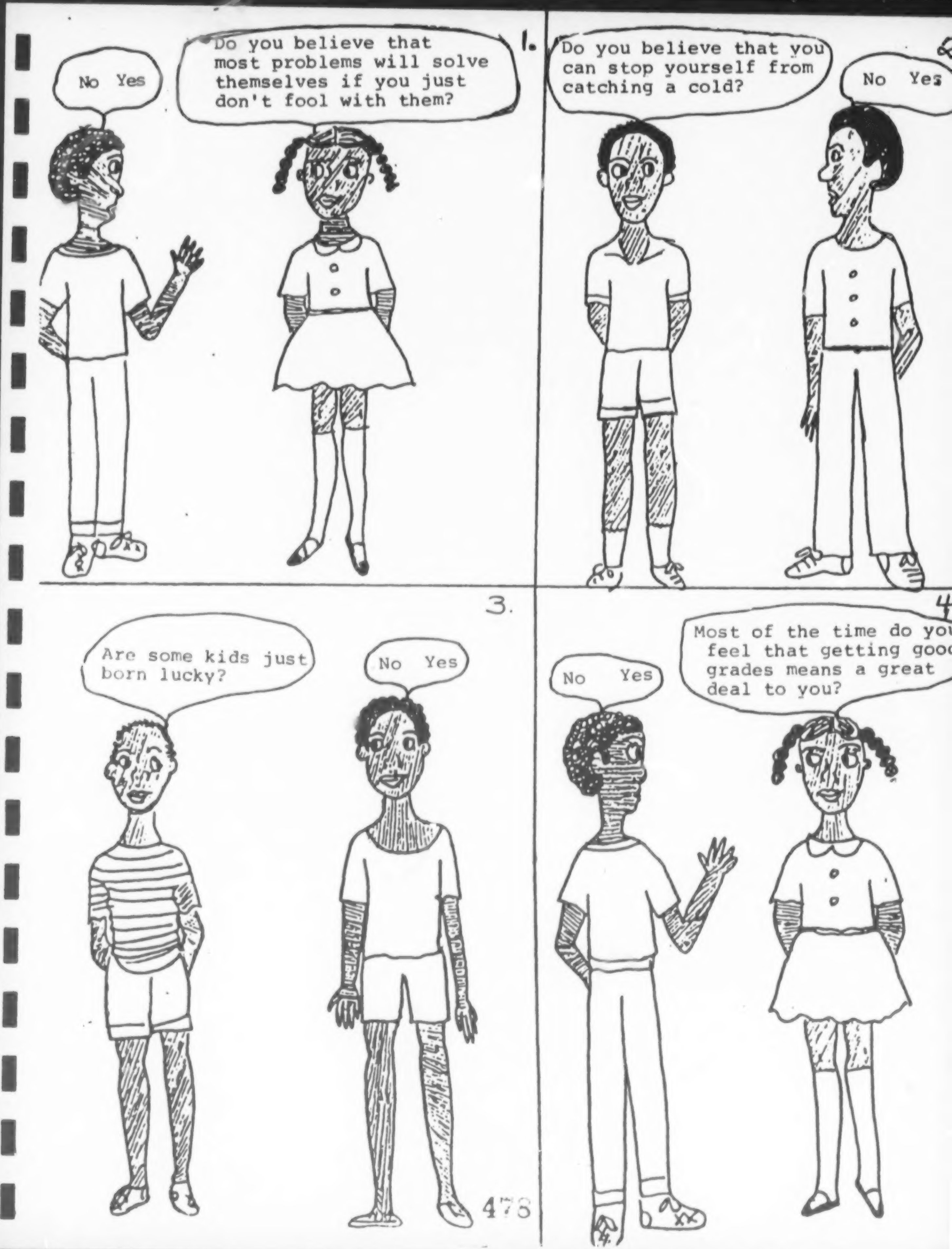
Code______________

Some Interesting Questions

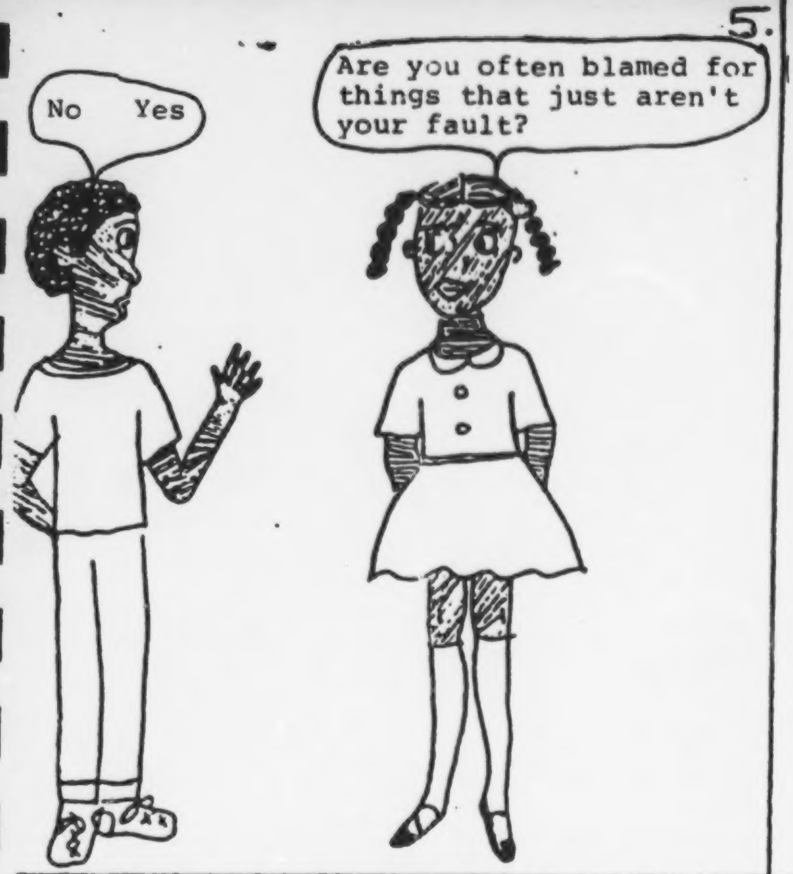
Example


Yes No
Do you always do the right things?

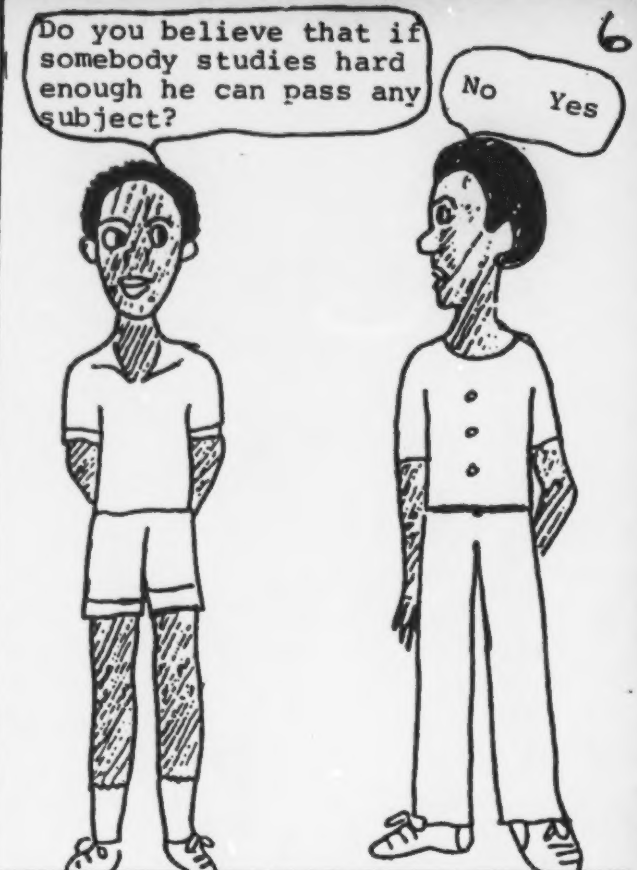
Nowicki & Strickland, 1973


1.
No Yes
Do you believe that most problems will solve themselves if you just don't fool with them?
Do you believe that you can stop yourself from catching a cold?
No Yes
3.
Are some kids just born lucky?
No Yes
4
No Yes
Most of the time do you feel that getting good grades means a great deal to you?

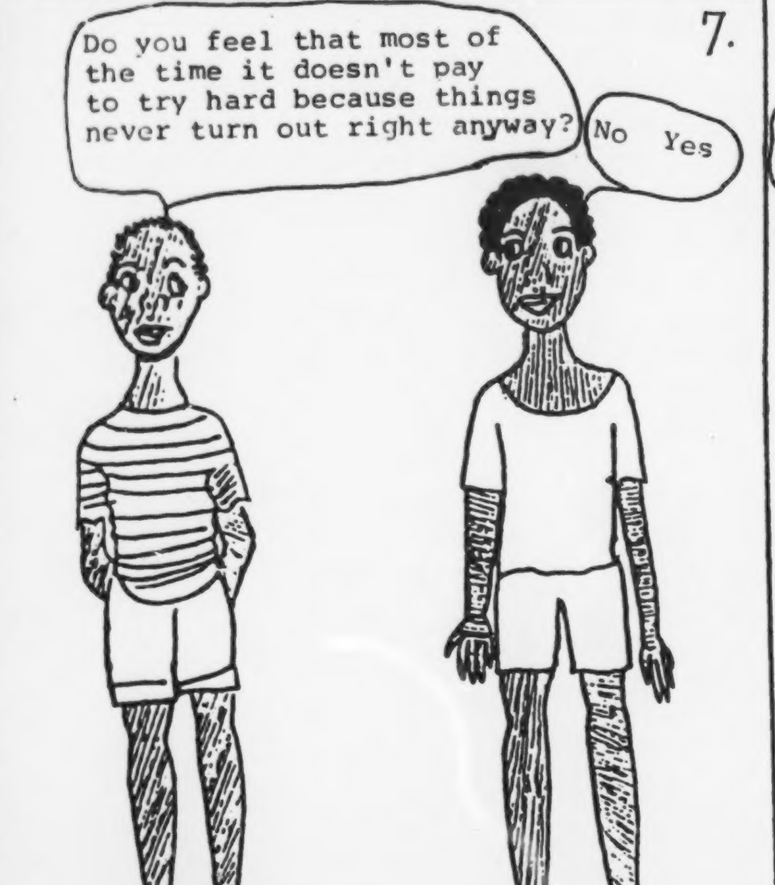
5.


No Yes
Are you often blamed for things that just aren't your fault?

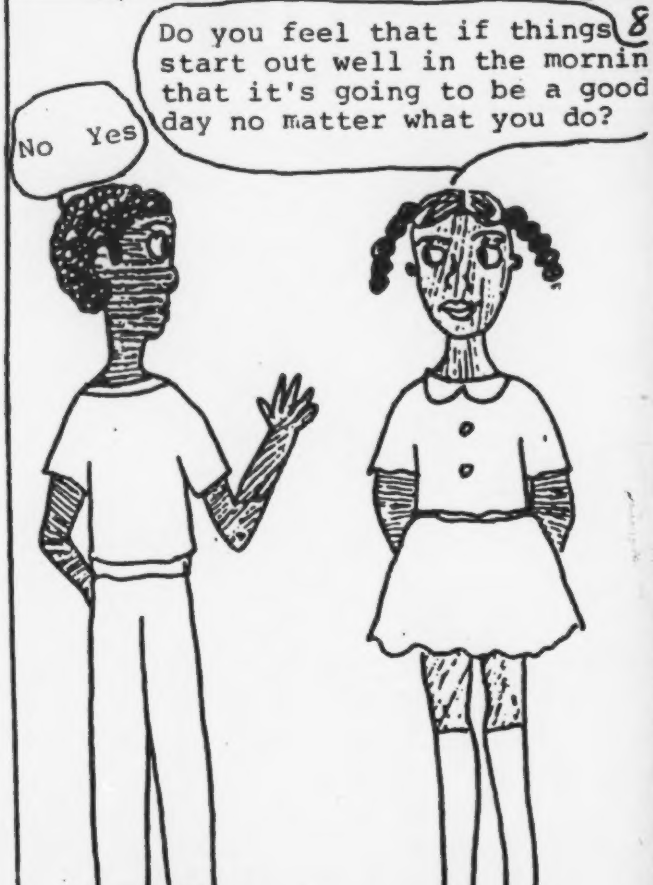
6

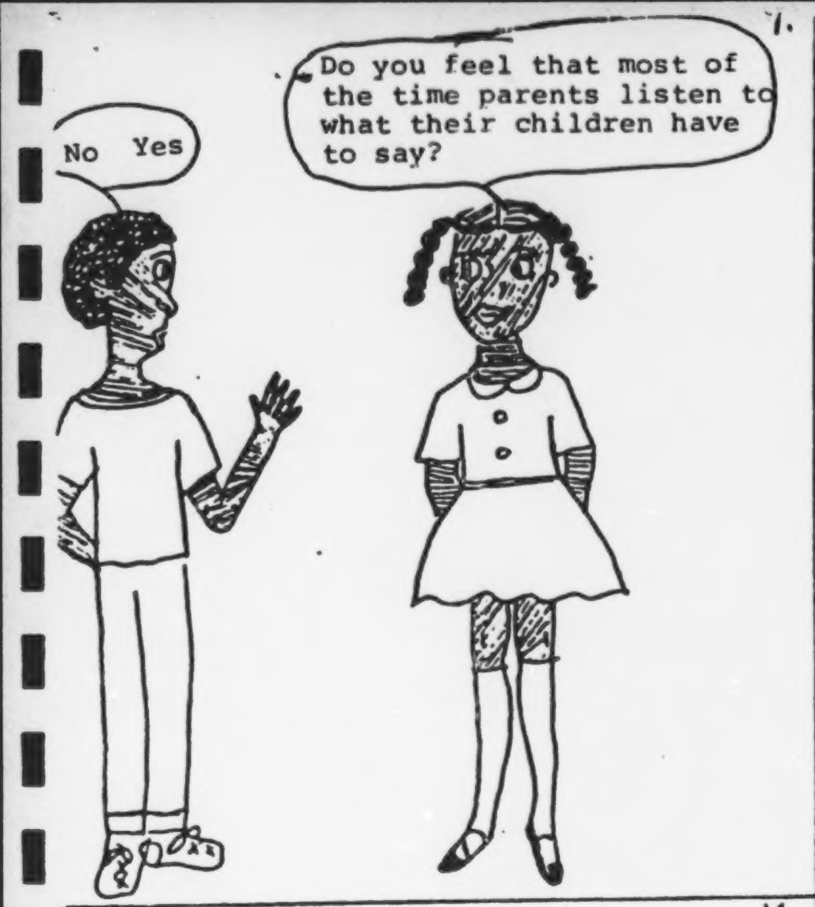

Do you believe that if somebody studies hard enough he can pass any subject?
No Yes

7.


Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
No Yes

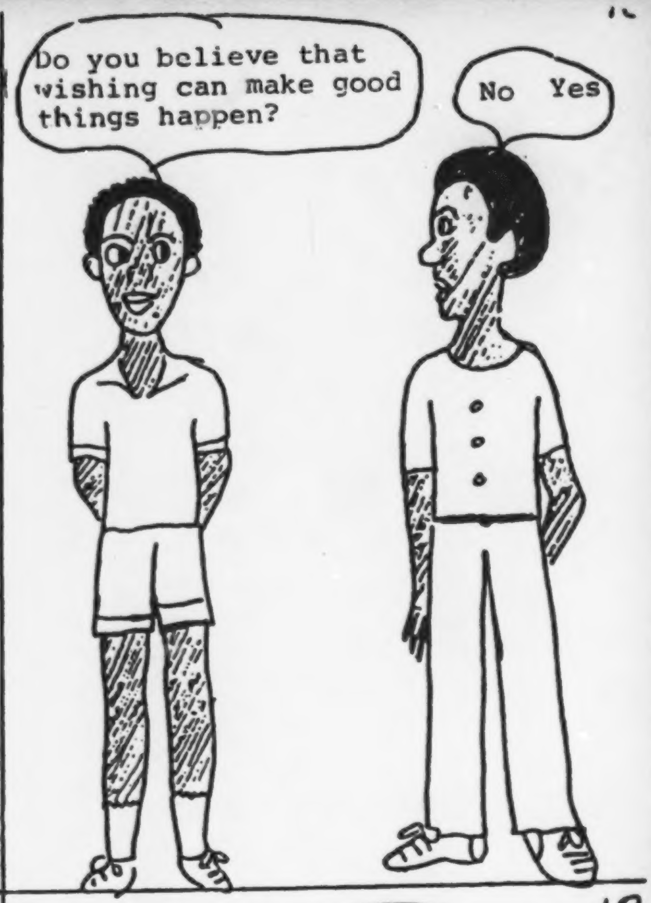
8


No Yes
Do you feel that if things start out well in the mornin that it's going to be a good day no matter what you do?



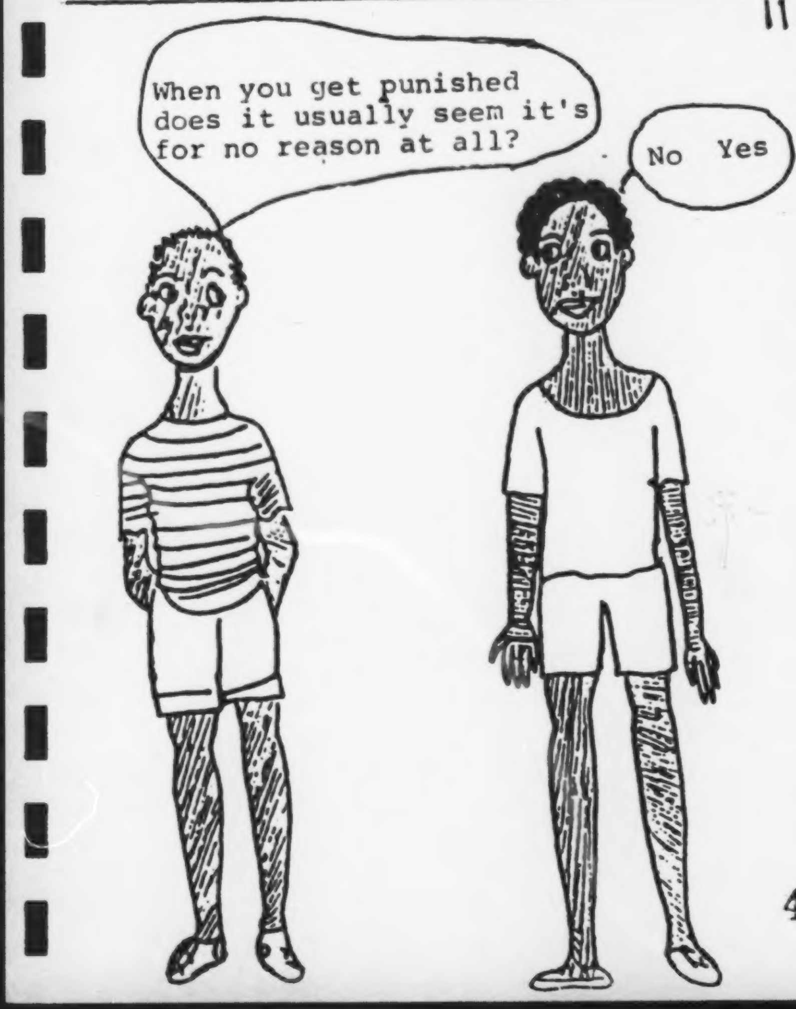
9.

No Yes
Do you feel that most of the time parents listen to what their children have to say?



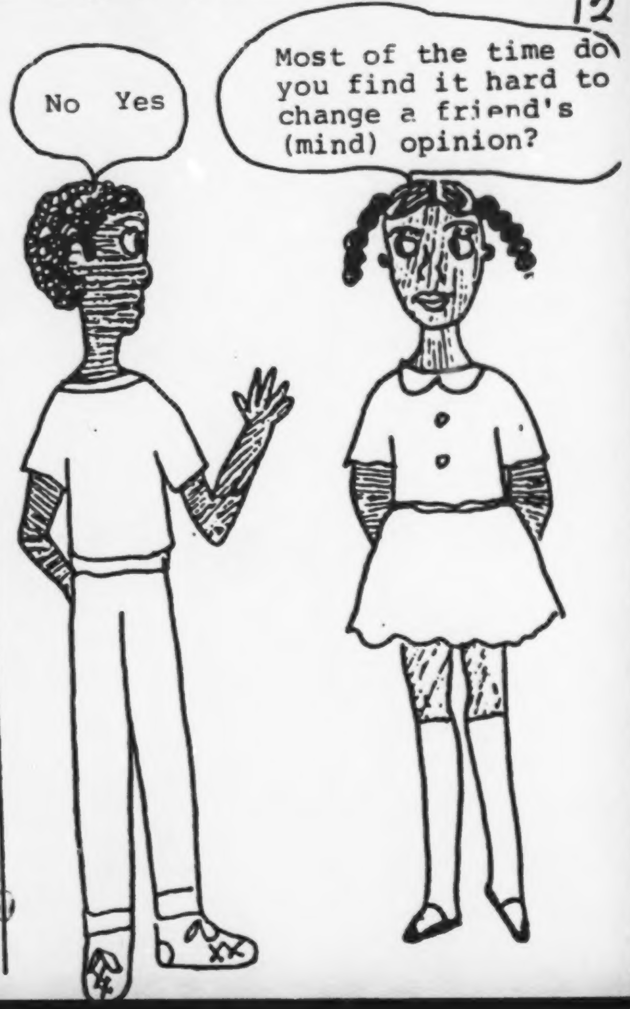
10

Do you believe that wishing can make good things happen?
No Yes



11.

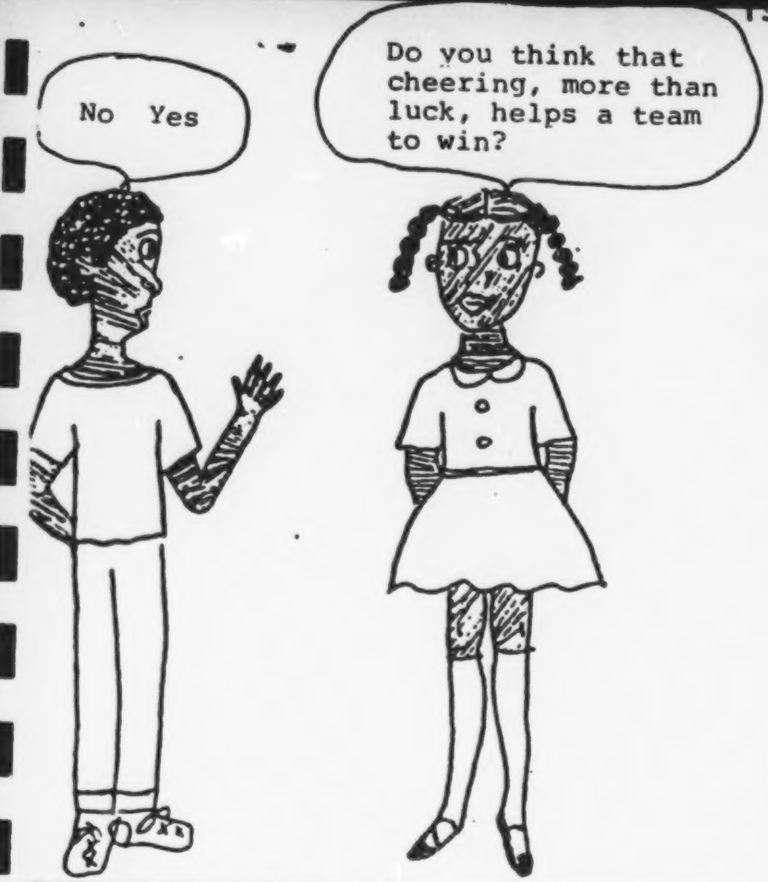
When you get punished does it usually seem it's for no reason at all?
No Yes



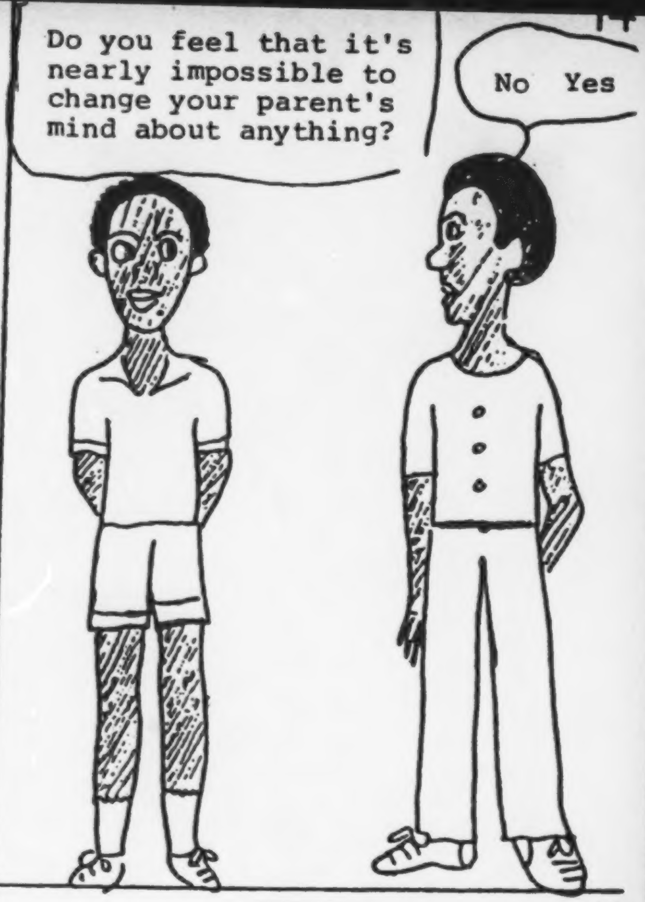
12

No Yes
Most of the time do you find it hard to change a friend's (mind) opinion?

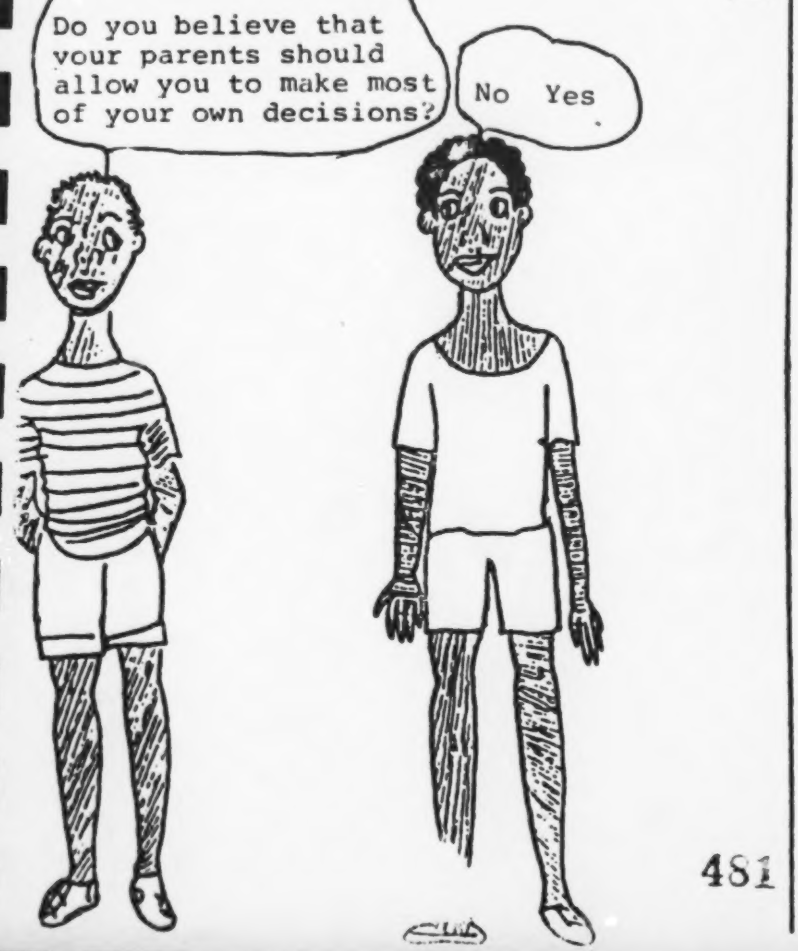
13.


No Yes
Do you think that cheering, more than luck, helps a team to win?

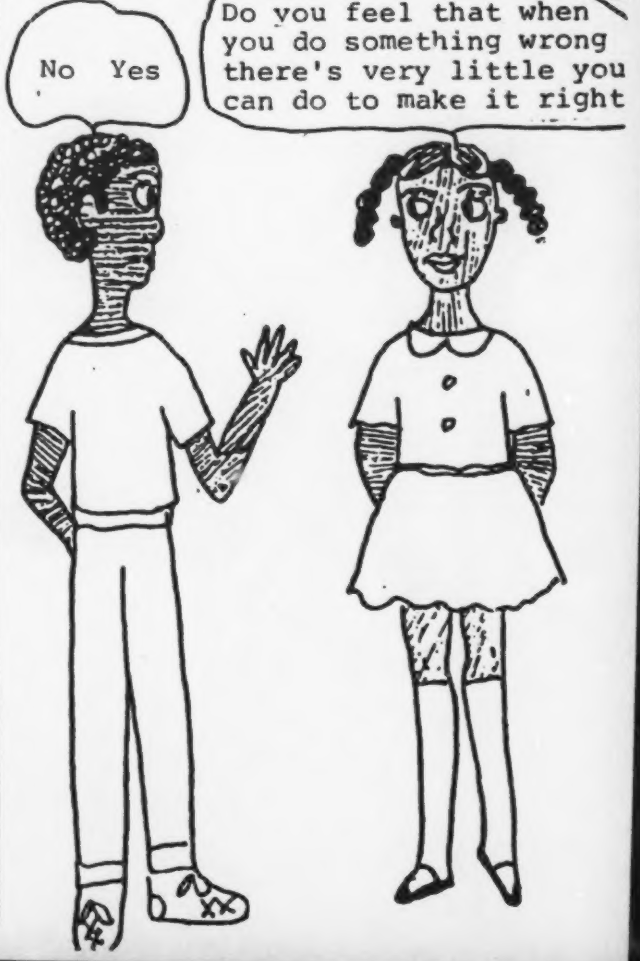
14

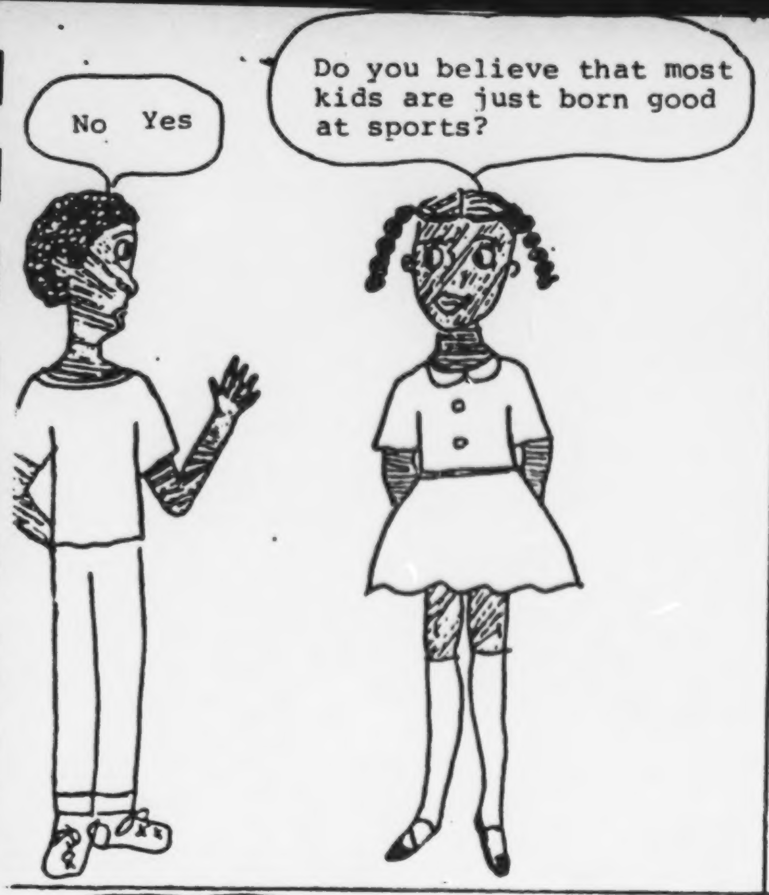

Do you feel that it's nearly impossible to change your parent's mind about anything?
No Yes

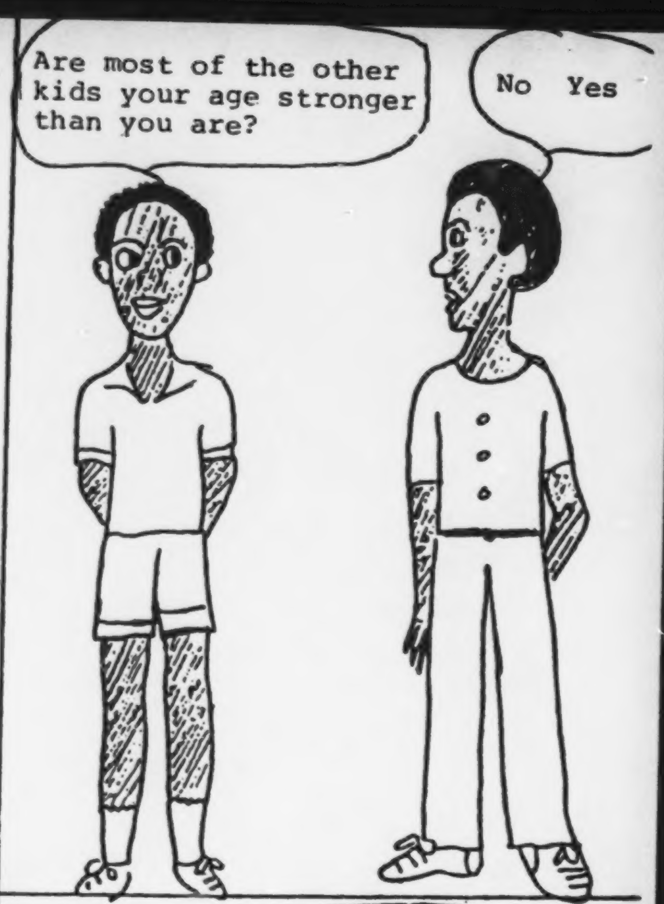
15.


Do you believe that your parents should allow you to make most of your own decisions?
No Yes

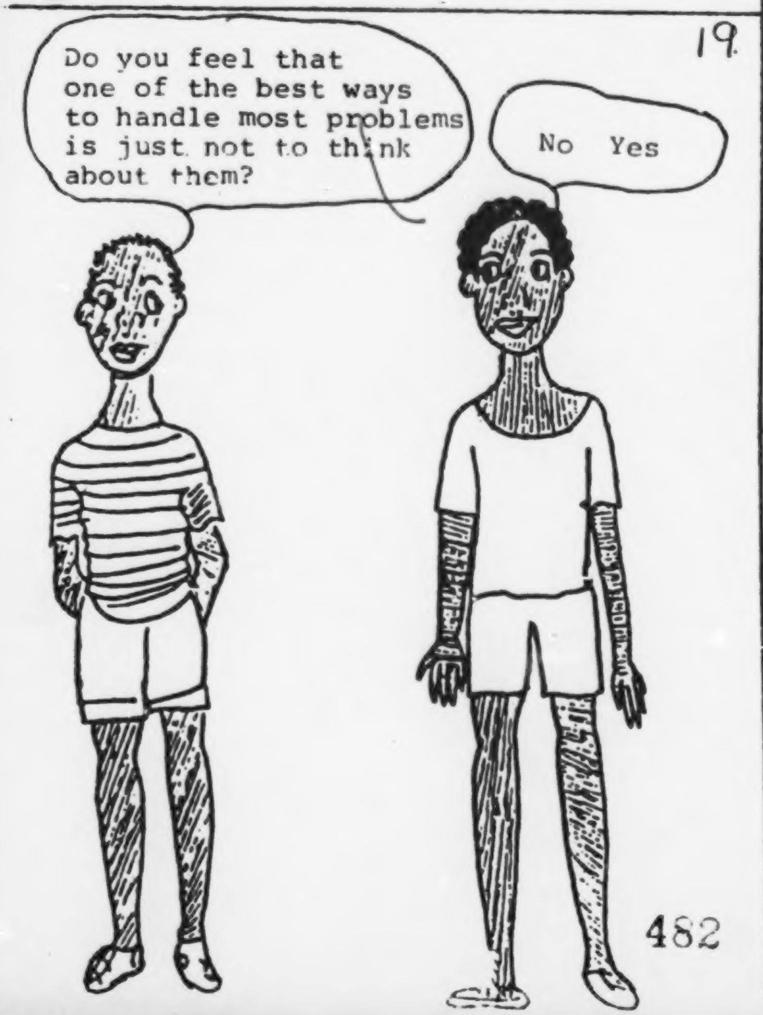
16


No Yes
Do you feel that when you do something wrong there's very little you can do to make it right

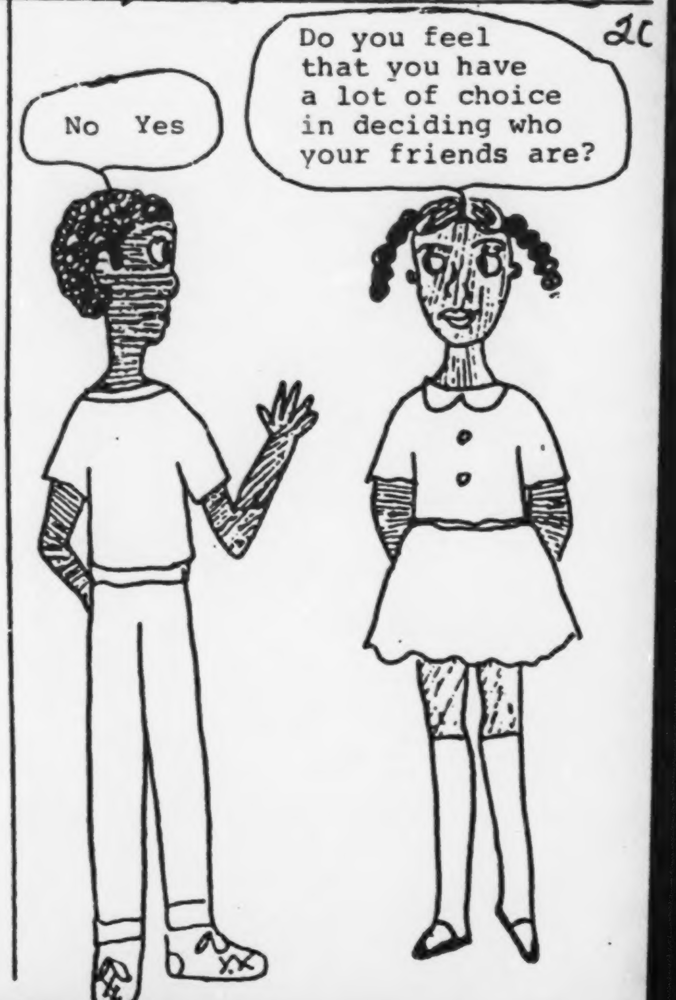

No Yes
Do you believe that most kids are just born good at sports?


Are most of the other kids your age stronger than you are?
No Yes

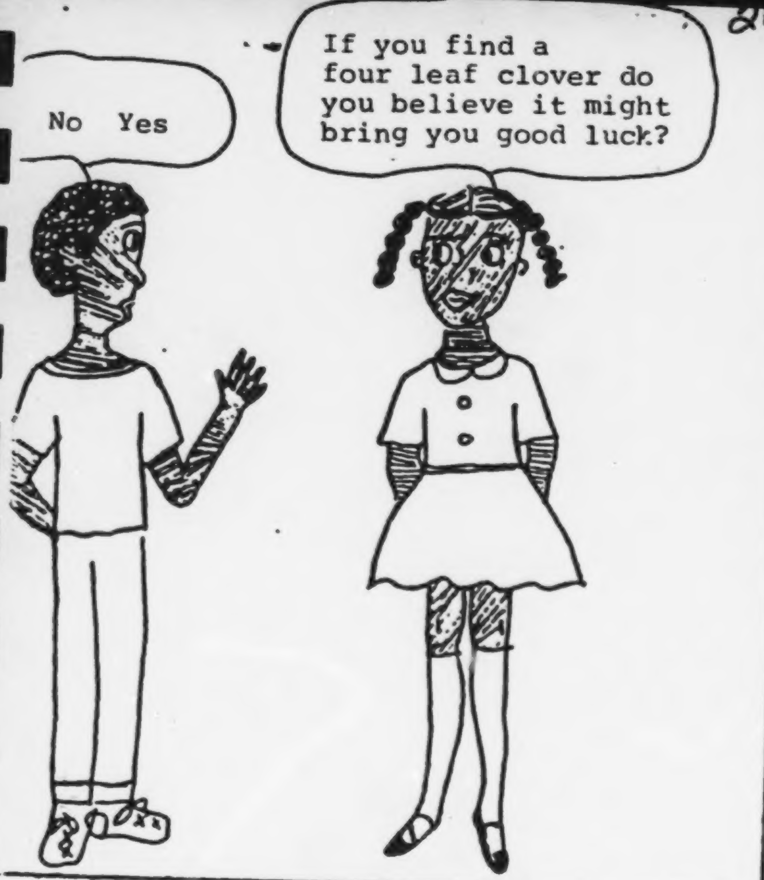
19.


Do you feel that one of the best ways to handle most problems is just not to think about them?
No Yes

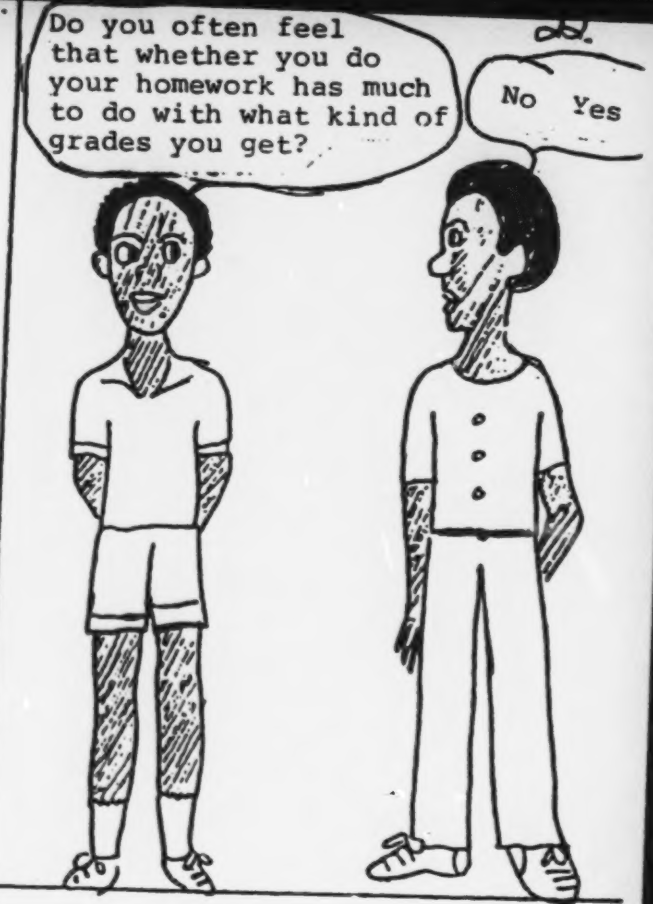
20


No Yes
Do you feel that you have a lot of choice in deciding who your friends are?

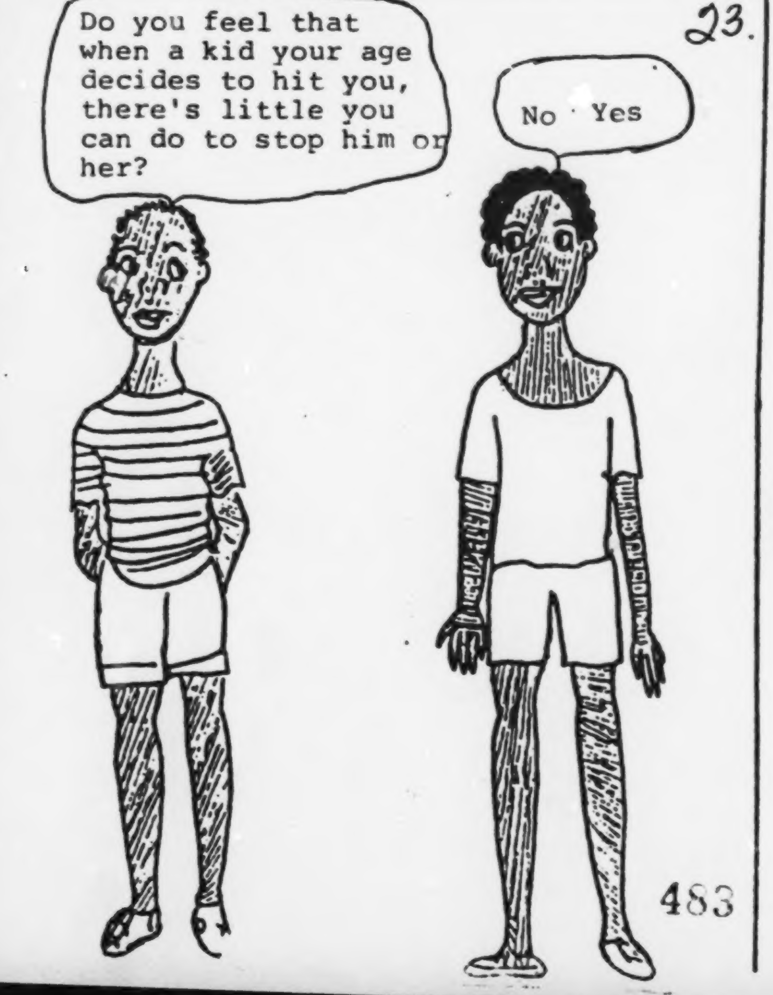
21.


If you find a four leaf clover do you believe it might bring you good luck?
No Yes

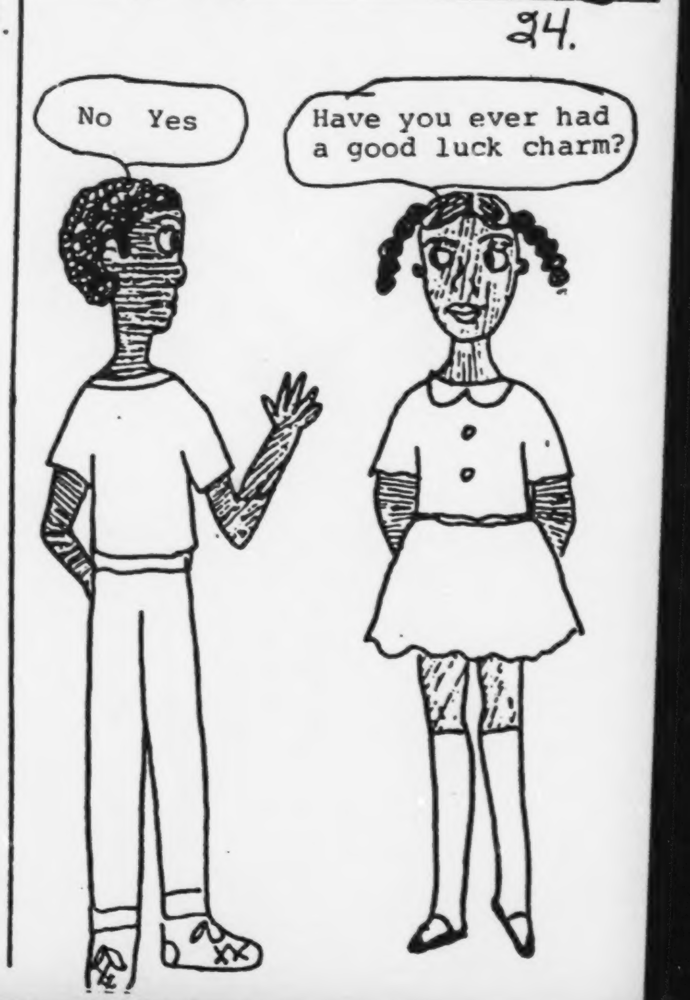
22.


Do you often feel that whether you do your homework has much to do with what kind of grades you get?
No Yes

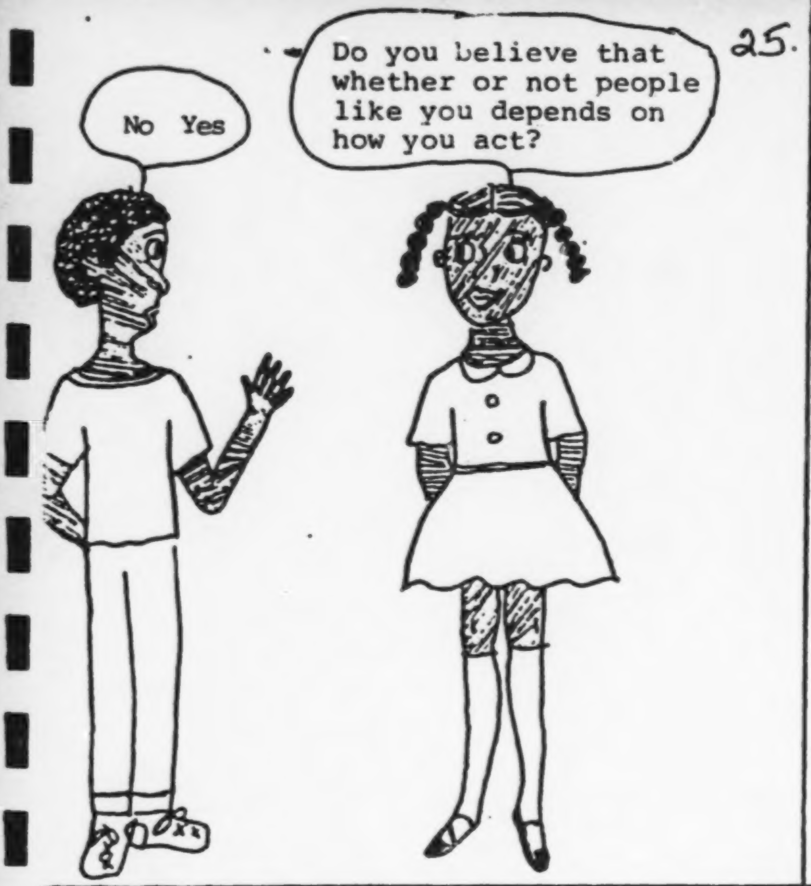
23.


Do you feel that when a kid your age decides to hit you, there's little you can do to stop him or her?
No Yes

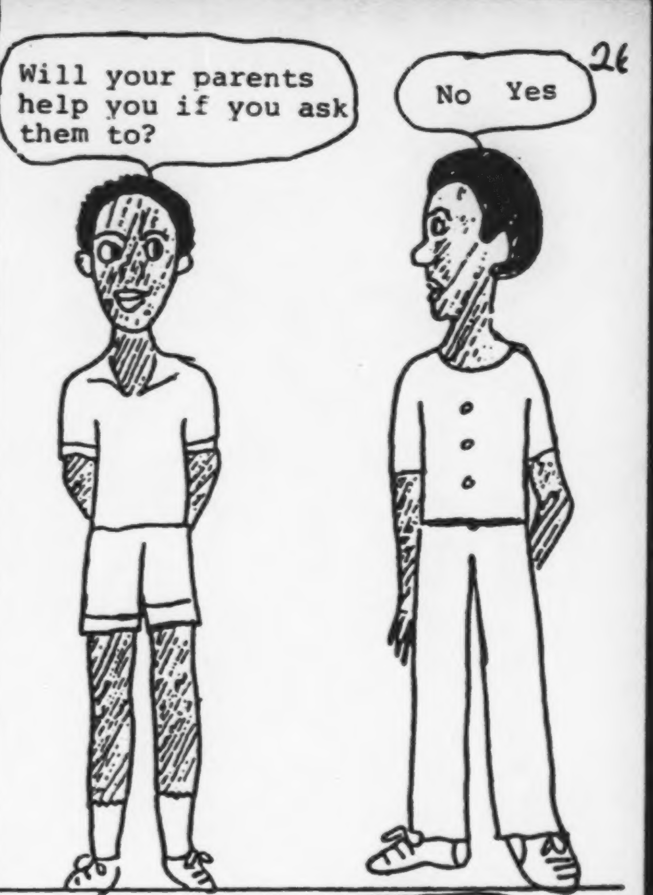
24.


No Yes
Have you ever had a good luck charm?

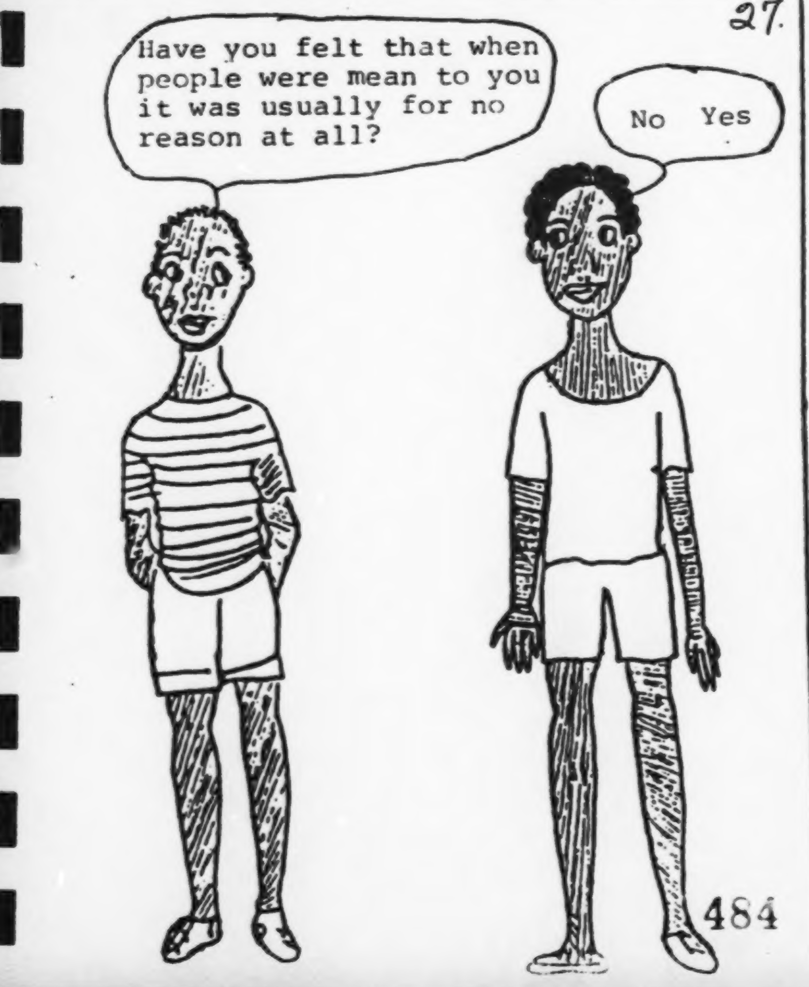
25.


No Yes
Do you believe that whether or not people like you depends on how you act?

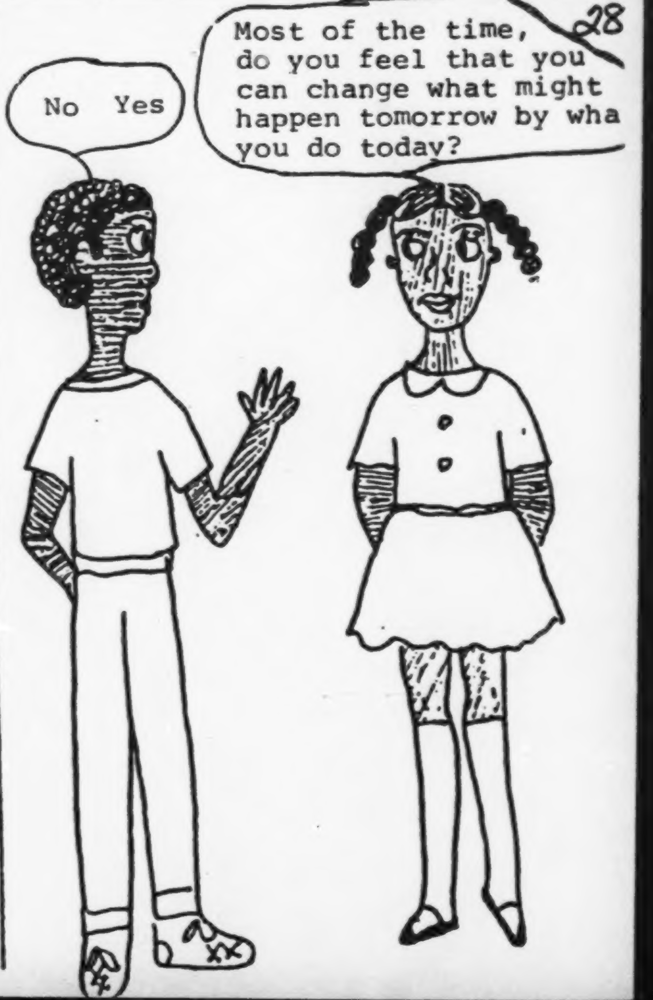
26


Will your parents help you if you ask them to?
No Yes

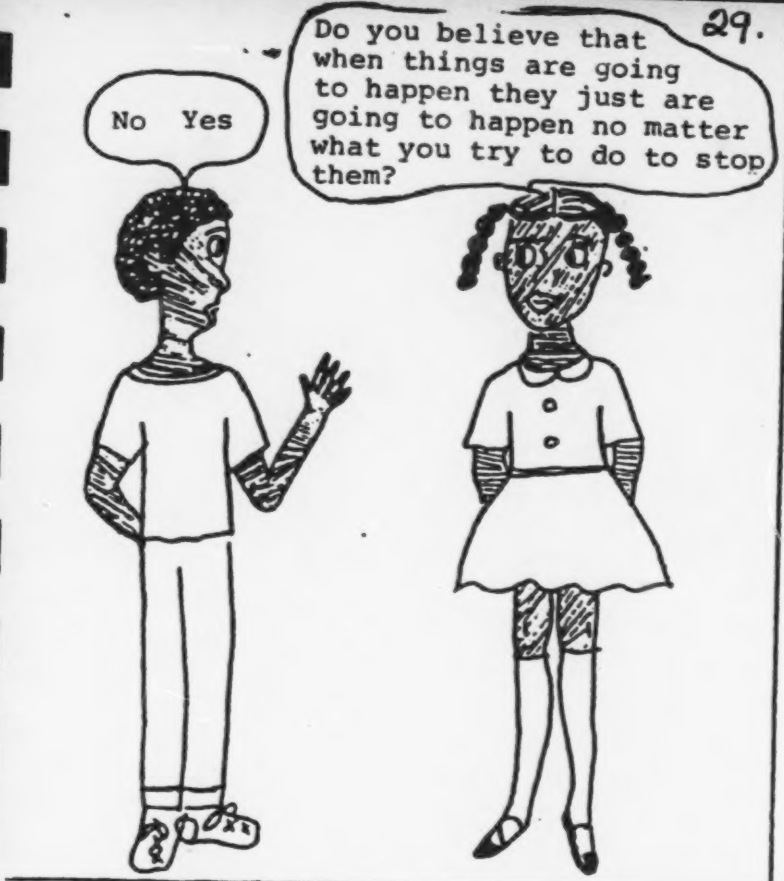
27.


Have you felt that when people were mean to you it was usually for no reason at all?
No Yes

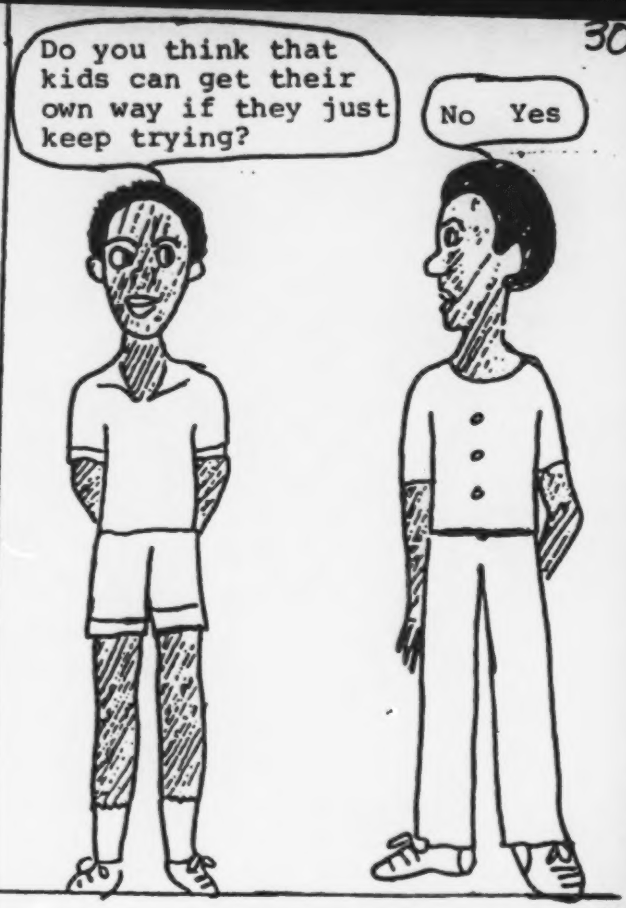
28


No Yes
Most of the time, do you feel that you can change what might happen tomorrow by wha you do today?

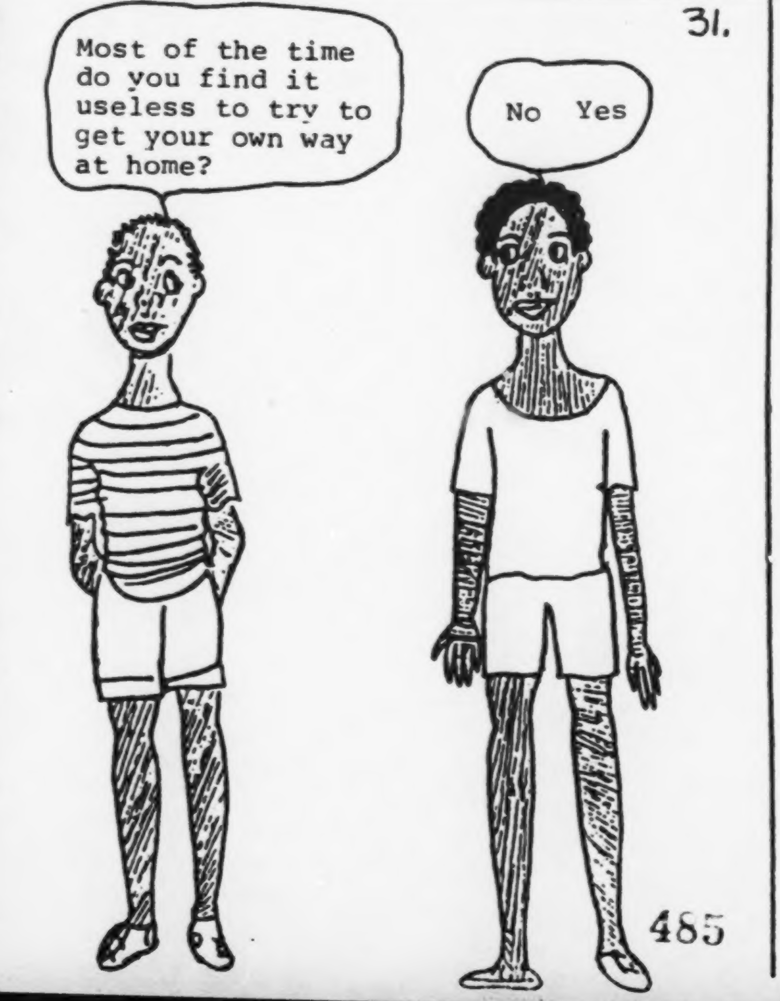
29.


No Yes
Do you believe that when things are going to happen they just are going to happen no matter what you try to do to stop them?

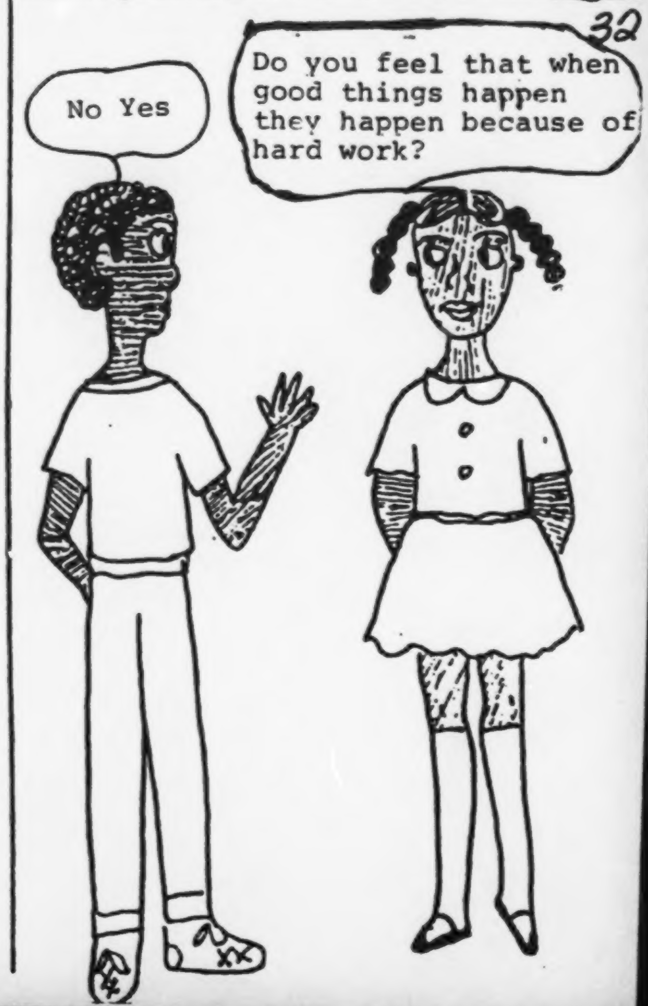
30


Do you think that kids can get their own way if they just keep trying?
No Yes

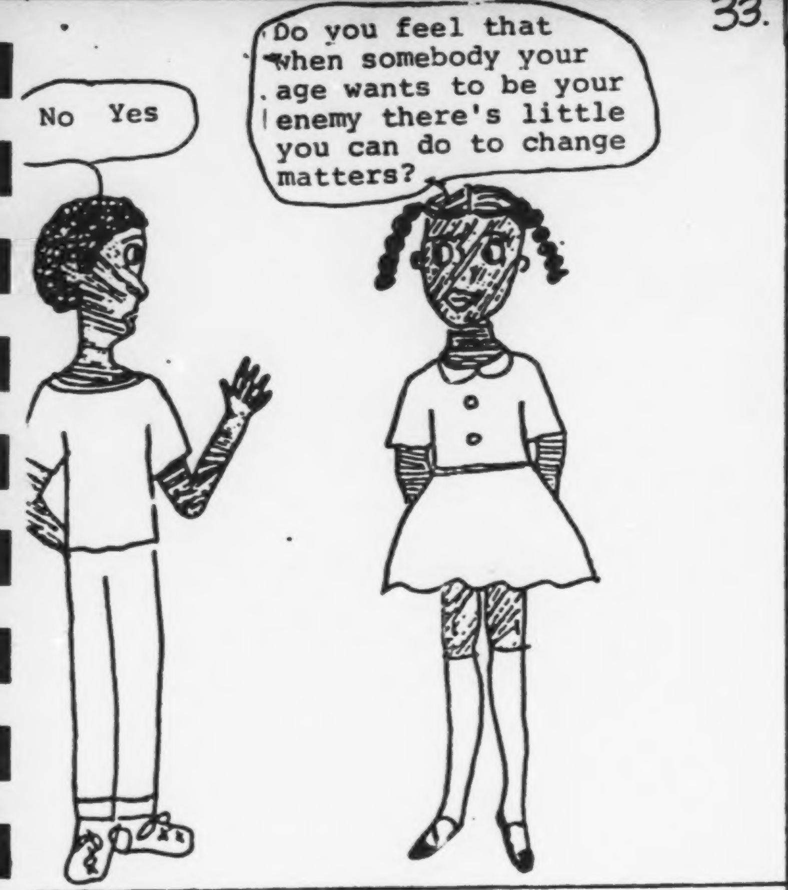
31.


Most of the time do you find it useless to try to get your own way at home?
No Yes

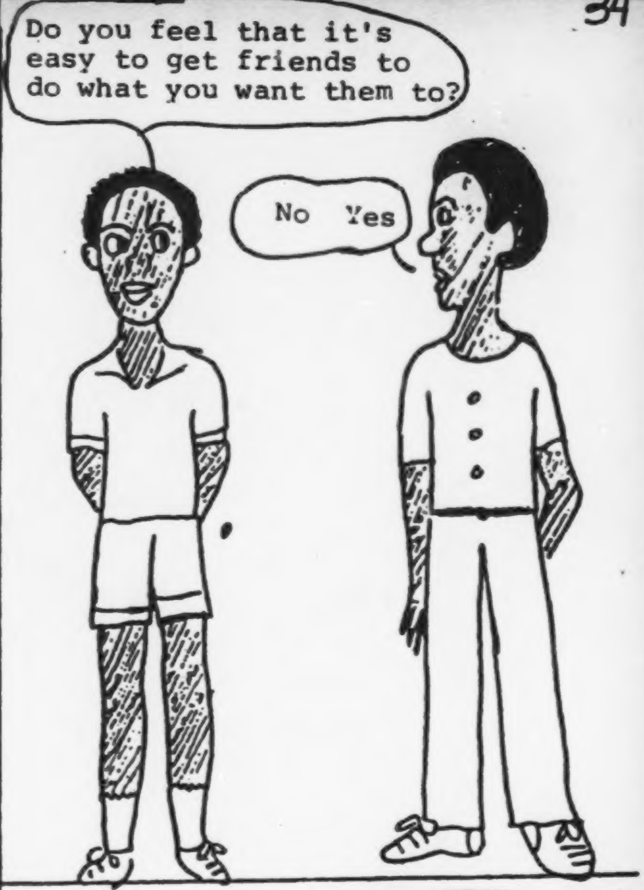
32


No Yes
Do you feel that when good things happen they happen because of hard work?

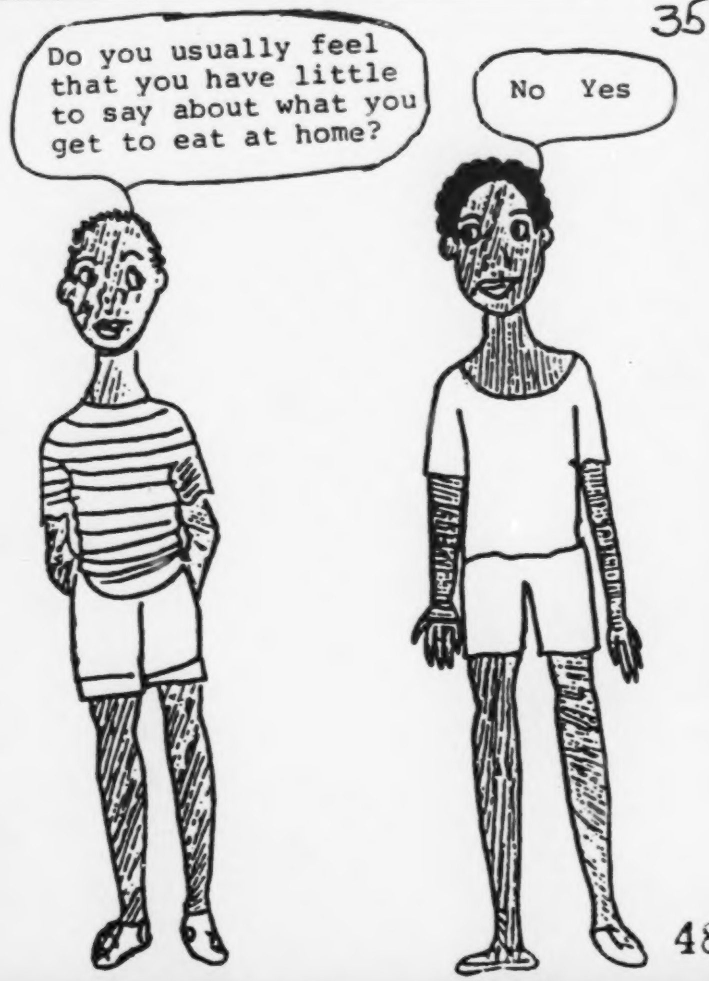
33.


No Yes
Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?

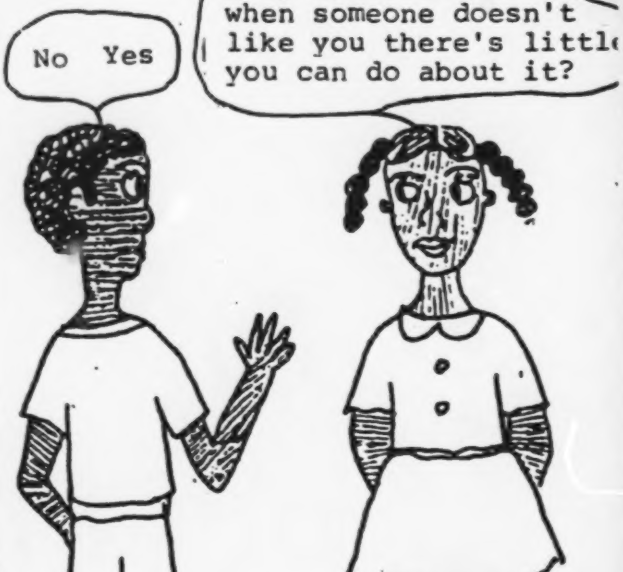
34


Do you feel that it's easy to get friends to do what you want them to?
No Yes

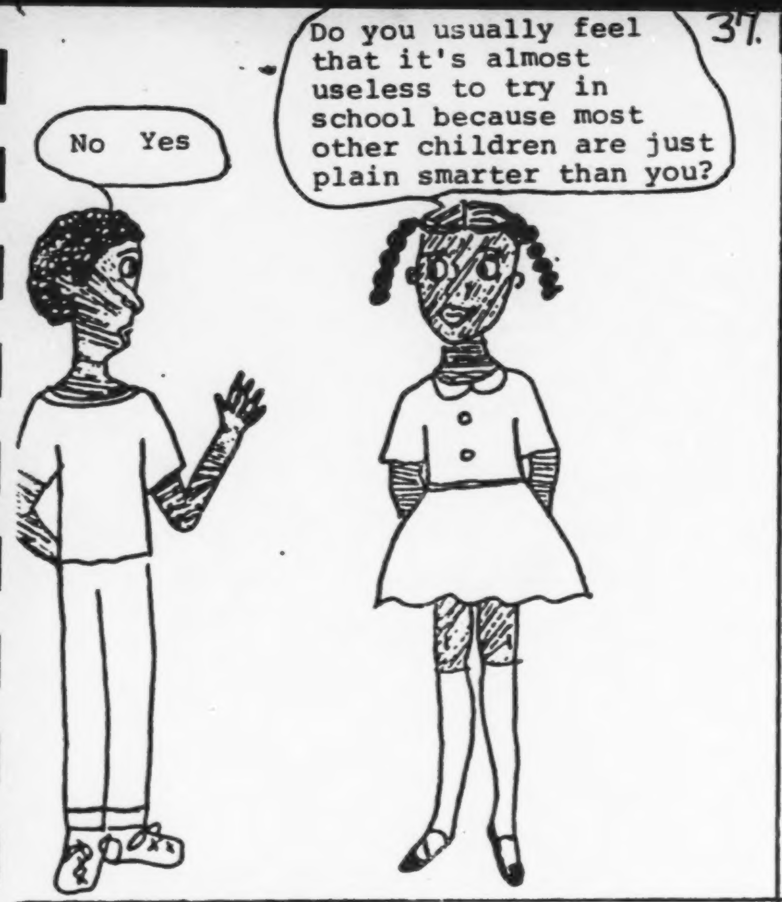
35.


Do you usually feel that you have little to say about what you get to eat at home?
No Yes

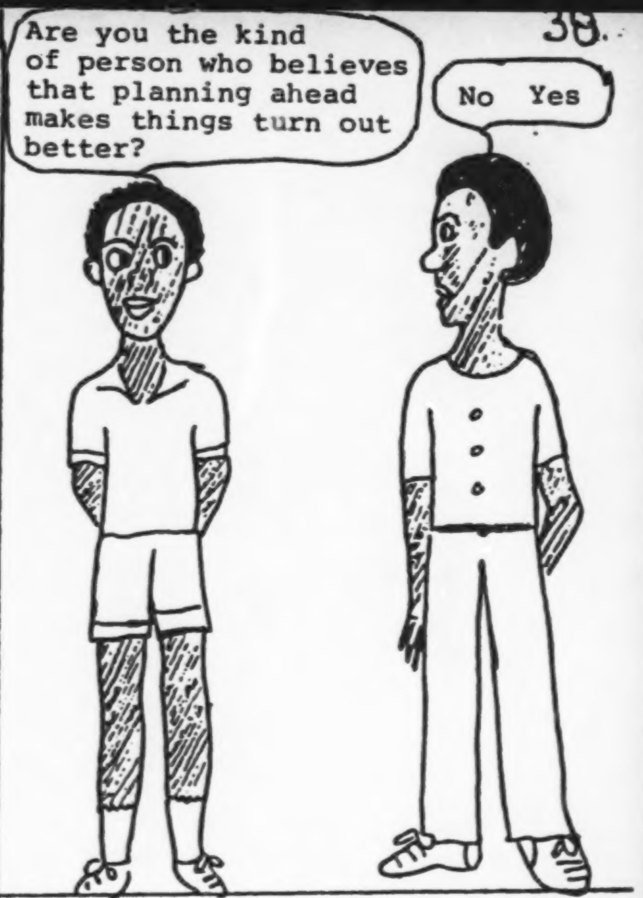
36.


No Yes
Do you feel that when someone doesn't like you there's littl you can do about it?

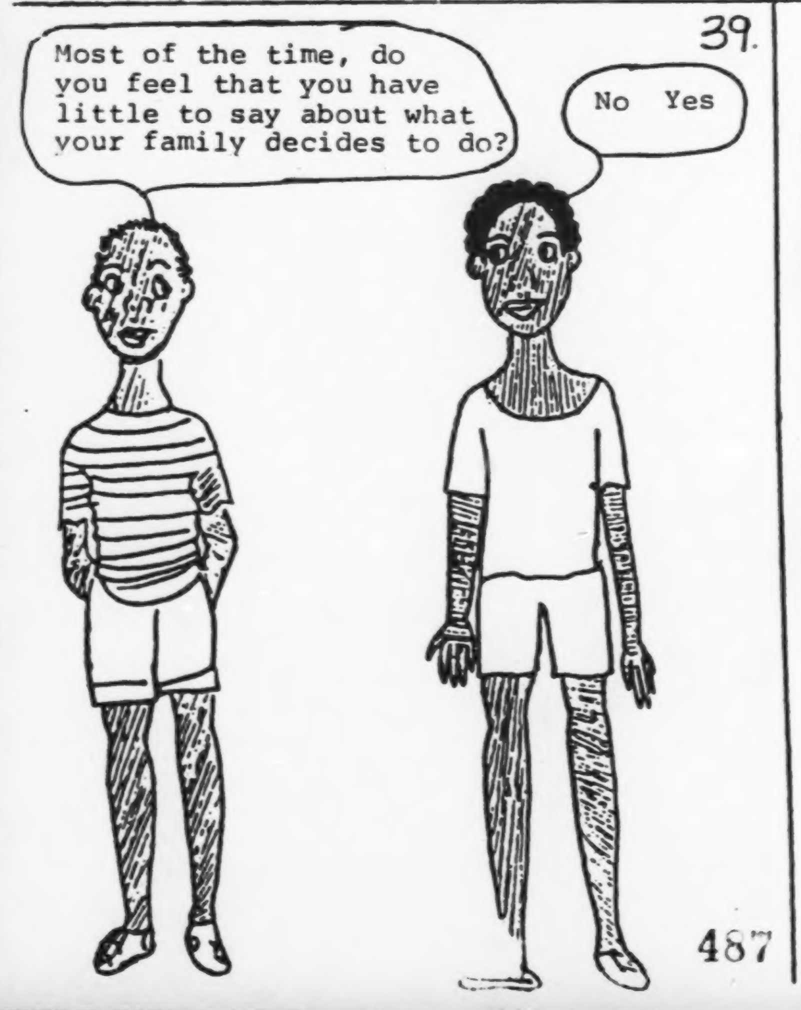
37.


No Yes
Do you usually feel that it's almost useless to try in school because most other children are just plain smarter than you?

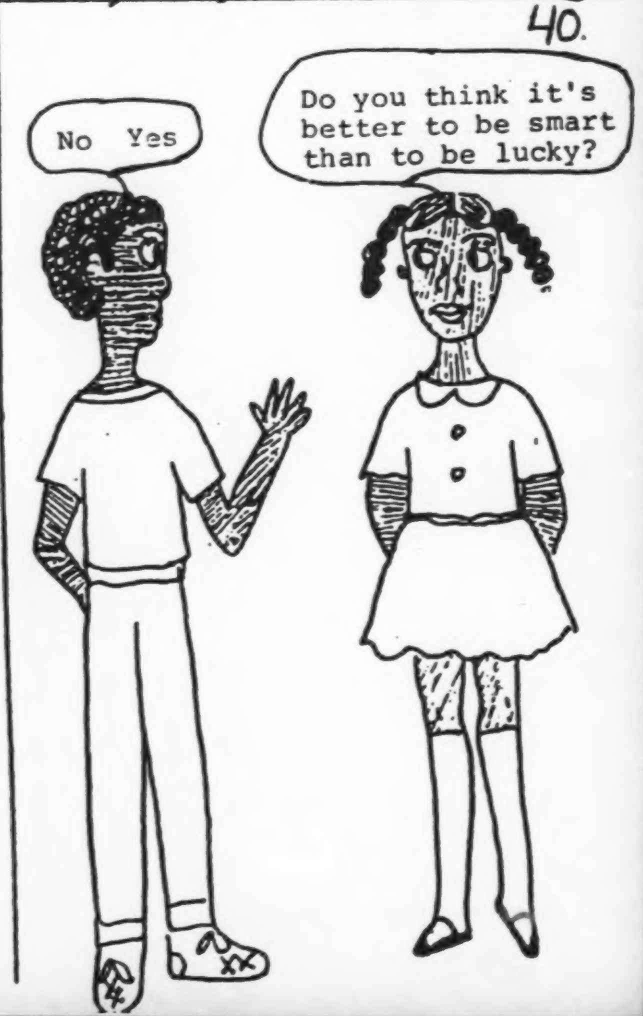
38.


Are you the kind of person who believes that planning ahead makes things turn out better?
No Yes

39.


Most of the time, do you feel that you have little to say about what your family decides to do?
No Yes

40.


No Yes
Do you think it's better to be smart than to be lucky?

Appendix C-11

hse

Code______

All About Me

Hare, 1977

Appendix C-11

Please circle the letter in front of the answer which best describes how you feel about the sentence. The sentences are designed to find out how you generally feel when you are with other people your age. There are no right or wrong answers.

1. I have at least as many friends as other people my age.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

2. I am NOT as popular as other people my age.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

3. In the kinds of things that people my age like to do, I am at least as good as most other people.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

4. People my age often pick on me.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

5. Other people think I am a lot of fun to be with.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

6. I usually keep to myself because I am NOT like other people my age.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

7. Other people wish that they were like me.

A. strongly disagree
B. disagree
C. agree
D. strongly agree

8. I wish I were a different kind of person because I'd have more friends.

A. strongly disagree
B. disagree
C. agree
D. strongly agree

9. If my group of friends decided to vote for leaders of their group, I'd be elected to a high position.

A. strongly disagree
B. disagree
C. agree
D. strongly agree

10. When things get tough, I am NOT a person that other people my age would turn to for help.

A. strongly disagree
B. disagree
C. agree
D. strongly agree

Appendix C-11

Please circle the letter in front of the answer which best describes how you feel about the sentence. These sentences are designed to find out how you generally feel when you are with your family. There are no right or wrong answers.

1. My parents are proud of the kind of person I am.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

2. No one pays much attention to me at home.

   A. strongly disagree
   B. disagree
   C. agree
   D. stronly agree

3. My parents feel that I can be depended on.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

4. I often feel that my parents would have been happier with a child other than me.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

5. My parents try to understand me.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

6. My parents expect too much of me.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

7. I am an important person to my family.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

8. I often feel unwanted at home.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

9. My parents believe that I will be a success in the future.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

10. I often wish that I had been born into another family.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

Appendix C-11

Please circle the letter in front of the answer which best describes how you feel about the sentence. These sentences are designed to find out how you generally feel when you are in school. There are no right or wrong answers.

1. My teachers expect too much of me.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

2. In the kinds of things we do in school, I am at least as good as other people in my classes.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

3. I often feel worthless in school.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

4. I am usually proud of my report card.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

5. School is harder for me than for most other people.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

6. My teachers are usually happy with the kind of work I do

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

7. Most of my teachers do NOT understand me.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

8. I am an important person in my classes.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

9. It seems that no matter how hard I try, I never get the grades I deserve.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

10. All and all, I feel I've been very fortunate to have had the kinds of teachers I've had since I started school.

   A. strongly disagree
   B. disagree
   C. agree
   D. strongly agree

APPENDIX D

COOPERATIVE LEARNING WORKSHOP MATERIALS

Appendix D-1

PROJECT ON ACADEMIC STRIVING

INTERMEDIATE SCHOOL

January 22, 1985

Dear Teachers and Classroom Aides:

The Project on Academic Striving would like to invite you to participate in a workshop on Cooperative Learning, Wednesday, February 6th, 1985, from 3 PM to 5 PM at I. S. . All I. S. staff participants in the workshop will be paid the regular project consulting fee of $18 per hour for the afternoon time.

The topic of the workshop is one that the Teacher Planning Team feels could be very valuable in the school. Cooperative learning has been found repeatedly to result in achievement gains and in raising students' esteem for one another. The Project on Academic Striving has believed for some time that increasing peer esteem would be a key to strengthening the learning environment in the school, and that this could be worked on both through group guidance and in the academic classroom.

The specific approach that will be taught in the workshop is Student Teams-Achievement Divisions (STAD), which is briefly described in the accompanying pamphlet starting on page 9. You will find information about the results of evaluations of STAD and other cooperative learning techniques starting on page 18 of the pamphlet. It is very clear from these evaluations that the techniques are relevant to the students at I. S. , both in the regular and in special education classes.

The workshop will be conducted by Ms. Barbara Bennett of the Center for Social Organization of Schools at Johns Hopkins University in Baltimore. Ms. Bennett has had extensive experience working with teachers around the country. She looks forward to visiting the school.

The workshop promises to be a lot of fun. Do come!

More details will follow.

Project on Academic Striving Staff

P.S There are not quite enough copies of the pamphlet to go around, so may we ask the teachers to share them with the aides? Thank you.

BEST COPY AVAILABLE

P. A. S., I. S.

Teams Games Tournament

What the teacher needs to prepare for T. G. T.

1. Brief lesson/lecturette/demonstration of the concept or skill to be learned. The idea is to teach something that the students can practice and get better at.

2. A worksheet for students to practice, or pages of a text or workbook with problems. Should be one copy for each team member. Problems should be easy to difficult.

3. A list or plan for grouping the students heterogeneously, avoiding pairing students who should not be in the same group.

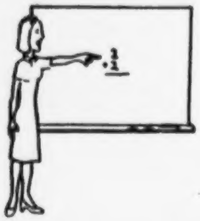
4. Questions for a team competition at the end of the practice session, or for a test.

5. In a variation on this, students could quiz each other.

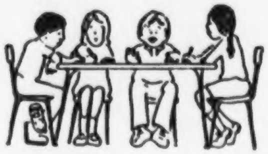
BASIC SCHEDULE OF ACTIVITIES FOR STAD, TGT AND JIGSAW II

STUDENT TEAMS-ACHIEVEMENT DIVISIONS (STAD)

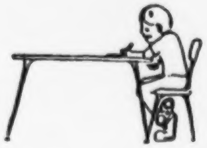
TEACH



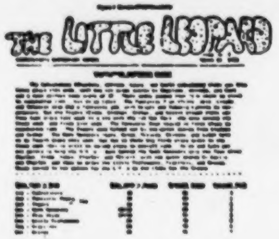
TEAM STUDY



TEST

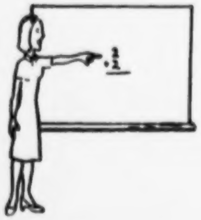


TEAM RECOGNITION

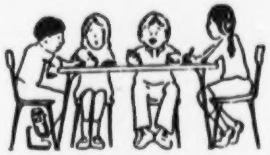

THE LITTLE LEOPARD

TEAMS-GAMES-TOURNAMENT (TGT)

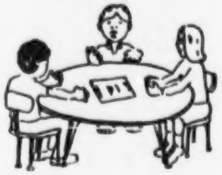
TEACH



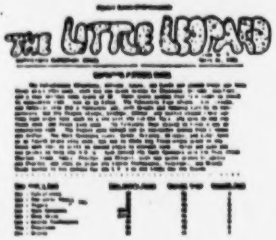
TEAM STUDY



TOURNAMENT

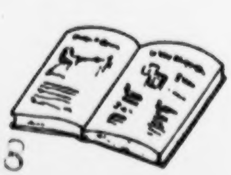


TEAM RECOGNITION

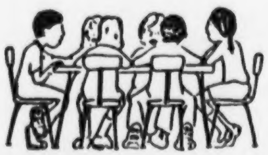

THE LITTLE LEOPARD

JIGSAW II

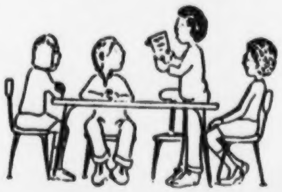
TEXT



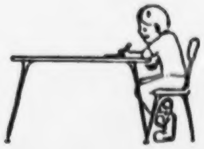
TALK



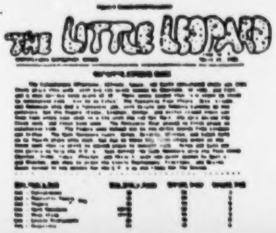
TEAM REPORT



TEST



TEAM RECOGNITION


THE LITTLE LEOPARD

Appendix D-2 cont.

Appendix D-2 cont.

THE JOHNS HOPKINS UNIVERSITY • BALTIMORE, MARYLAND 21218

Student Team Learning
CENTER FOR SOCIAL ORGANIZATION OF SCHOOLS
301-338-8249

BEST COPY AVAILABLE

To the Administrator

A Student Team Learning classroom is one in which students work and study together cooperatively and supportively helping one another learn. In the Student Team Learning classrooms in your school look for:

Focused instruction:

Teacher and students are aware of the objective. The teacher will present and develop the skill or concept with the students using any approach found to be effective with that class. Student Team Learning is designed to enhance not replace teacher instruction. The teacher is responsible for taking care that all skills and understandings necessary are taught.

Structured practice:

Team practice periods are for reinforcement. Teachers teach but students learn. Students work and study together in their small structured teams using materials designed to reinforce the concept or skill the teacher has taught. Each student is responsible not only to learn the content but to help his/her teammates understand the tasks. The students work toward a common goal - team success--and the success of the team depends on the degree to which its members learn.

The team practice period is an inter-active period and may be characterized by an industrious hum as students work together and seek clarification from their peers and the teacher.

Assessment:

With all the reinforcement, with the motivation for success, with the peer support - students learn.

In TGT there is individual competition in groups that are homogeneous in terms of performance. The students engage in instructional games and tournaments that assess their learning of the taught and practiced skill/concept. They compete to earn points for their team - the points each student earns are taken back to contribute to a team score. The structure of the tournament groups allows each student the chance to be successful if he/she does his best. The games and tournaments are exciting as well as instructionally sound. There will be reasonable "noise" as students have fun learning, but there should not be chaos. Learning can be a pleasure.

In STAD the students are given an individual quiz. Their quiz scores are used to contribute to a team score. An "improvement score" system may be used to keep the team competition fair as each student earns points to the degree that he/she exceeds past performance.

The reward system:

Recognition for team success is given through the bulletin board and class newsletter. Students will work for the simple reward. They do not have to have the tangibles we usually tend to offer.

How can you, the administrator, support the teachers, guides and students in the Student Team Learning classroom?

1. Provide support as the teachers and guides seek and prepare materials (time, paper, etc.)
2. Show interest in the students' activities when they are engaged in practice or tournaments. Be supportive of the industrious classroom.
3. Demonstrate interest in the bulletin boards and newsletters. The students are proud of their success.
4. Look for the results - increased learning and an improvement in intergroup relations in the Student Team Learning classroom where students enjoy learning together.

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Appendix D-3

Public
Education
Association

20 West 40th Street
New York New York 10018
(212) 354-6100

February 12, 1985

TO: I.S.# Staff Members who participated in the February 6th Workshop

FROM: Joseph C. Grannis, Director, Project on Academic Striving

Mary Ellen Fahs, Public Education Association

We feel that the workshop on Student Team Learning on February 6th, sponsored by the Project on Academic Striving was productive and enjoyable. We hope you did, too!

As you know, Ms. Bennett has agreed to visit I.S.# again later in the semester; and the Project on Academic Striving will arrange it if you are interested. In the meantime, Project staff will be as supportive as we can be of any efforts you wish to make to introduce Student Team Learning to your classes.

We are enclosing a check for $36.00 as reimbursement for your participation in the two-hour workshop and some additional material that Ms. Bennett wanted you to have.

APPENDIX E

MATERIALS FOR SCHOOL-WIDE AND CLASSROOM INTERVENTIONS, 1985-86 SCHOOL YEAR

Appendix E-1

PROJECT ON ACADEMIC STRIVING

Report from the Workshop on a Code of Conduct for I.S.

Friday, September 6, 1985

Professor Grannis and Mrs. Fahs welcomed the staff members and thanked them for their participation on such a hot day. Professor Grannis explained to the new teachers that the Project on Academic Striving had been at I.S. # for several years working to identify and reduce stressors in the school. He said that this workshop was being held at the request of the staff and parents who had participated in two workshops in June to develop a Code of Conduct which all members of the school community would endorse. It had been the consensus of the previous sessions that discipline problems create stress for both adults and students and cooperative implementation of a Code of Conduct would make the school less stressful and more productive for everyone.

Two different presentations relating to a Code of Conduct were distributed: one was a "bare-bones" listing of the main items for a code and some rewards and punishments discussed at the June workshops; the second was a description of program goals and students behaviors to achieve those goals written in a fuller and more student-oriented way. Mrs. Fahs asked the staff to review both papers and try to decide which would be best for distribution to the students on Monday, if that is what the staff members decided they would like to have happen.

A number of very constructive comments were made concerning both drafts. These included: students should sign a copy of the code; "dangerous items" should be spelled out; The Code of Conduct was good because it was short and concise; the Goals of Our Program and Student Behavior were good because they were more positive and gave many indications of appropriate behavior as well as the reasons; the short code should be reworded somewhat ("should" changed to "are expected to"); Student Behavior needs some editing to eliminate some redundant parts (such as the reference to chewing gum on the second page); whichever code is given to the students should be on paper with punched holes so it can be kept in their notebooks; all the code items relate to three "Ps": Be Prepared, Pay attention, Participate; food should be eaten only in the lunchroom; teachers should not ask students to get sodas for them; the section sheet should include a place to note that students comply with the rules about not eating in the classroom; a committee should work on finalizing the code, the rewards and punishments, and appropriate student behaviors for a handbook as well as expanding the section sheet. There was also a discussion about whether teachers should eat only in the Teachers Lunchroom; Mrs. indicated that it was more important at this time to complete the discussion of the student code, which is now mandated by the state.

As staff members made the above suggestions they also gave indications of which code they preferred. This informal vote was tipped slightly in favor of the shorter code and it was agreed that it would be rewritten slightly. It was suggested that The Goals of Our Program and Student Behavior could be used by teachers in their discussions of the code and that students should be asked if they had any additional items to add to the code. Professor

Grannis then asked if those present agreed to work together on the implementation of a code of conduct. There was an affirmative response. He and Mrs. Fahs thanked everyone for their participation.

* * * * *

Minutes from the two June workshops which began the development of the current Code of Conduct are available for anyone who is interested in the Project on Academic Striving room in the Guidance Office.

INTERMEDIATE SCHOOL

- Principal

September 9, 1985

CODE OF CONDUCT

We ask everyone to follow this Code of Conduct so that our school will be a safe and pleasant place to learn and teach and play. We ask the cooperation of students, school staff and parents in making these few rules work.

1. Students and adults are expected to speak and act respectfully to each other in school. (No foul language will be used).
2. Students are expected to report to their homerooms at 8:40 A.M. and get to their classes on time.
3. Students are expected to bring pencils, pens and notebooks to school every day.
4. Passing between classes must be orderly. Students in the halls between classes without passes will be considered cutting.
5. There will be no fighting in the school or in front of the school.
6. There will be no defacing or damaging of school property.
7. Students are not to use the bathrooms during the change of class periods.
8. Radios and head sets are not allowed in the school.
9. Drugs and smoking are not allowed anywhere in the school.
10. Hats may not be worn in the school; outer garments should be kept in the classroom closets.
11. Students are expected to eat food only in the lunchroom. Snacks and gum must not be brought into the school.

Appendix E-2

GRAPH OF SCHOOL EVENTS: THINGS THAT HAPPEN IN SCHOOL

The graph shows how your class feels about events in the school. The bars show HOW OFTEN you think the events happen (1=hardly, 2=sometimes, 3=often). The numbers in parentheses tell HOW YOU FELT about the event (3=made no difference, 4=upset, 5=very upset).

I. Look at the graph and answer these questions. You may discuss the questions with the other students in your group.

1. Which 3 events happened most often for your class?

2. Which 3 events happened least often for your class?

3. Which 3 events made your class feel the best (worst)?

II. Now draw bars on your graph to show HOW OFTEN the whole 8th Grade thinks each of these events happen. (This is called the 8th grade average.) See Item 1 on the graph for an example of how to draw the bars. The following numbers tell you how big to make the bars.

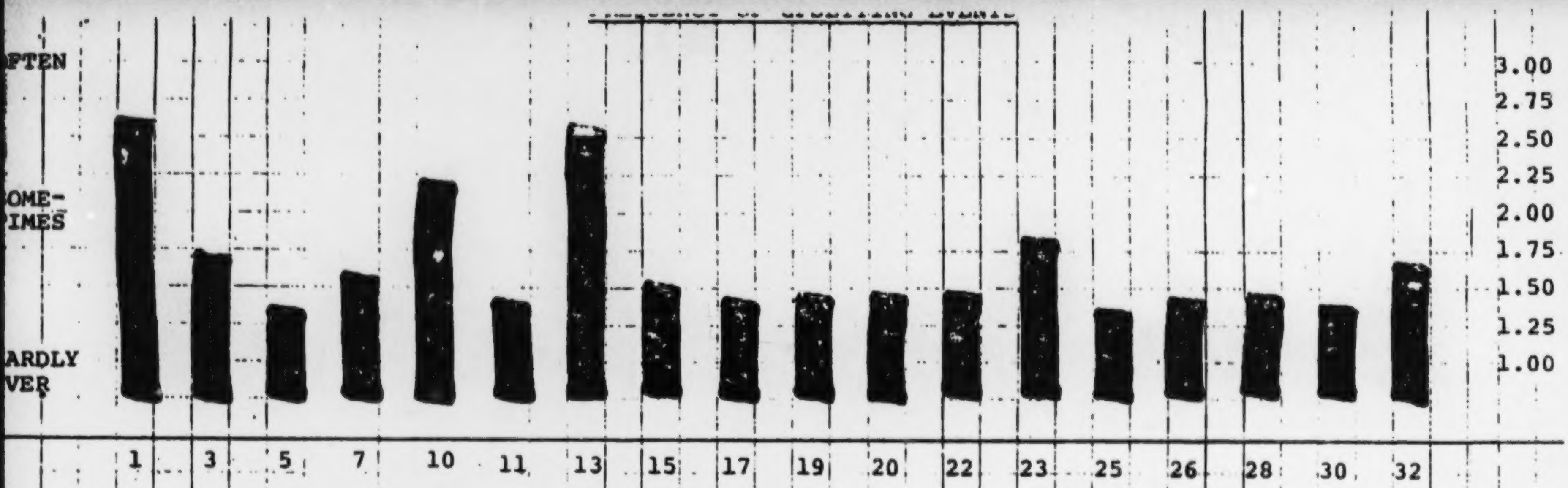
2)
4)
6)
7)
9)
10)
13)
16)
18)
20)
22)
24)
27)
30)
32)
34)
36)
38)
40)

III. Answer the following questions. You may discuss them with other students.

5. Which events happened more often in your class than the 8th grade average?

6. Which events happened less often in your class than the 8th grade average?

7. What could be done to make these events happen more often (less often)?



Appendix E-2 cont.

3.3 1. There was a lot of cursing in class.

• 3.75 3. Someone tried to copy my work when I didn't want them to.

* 4.12 5. Someone hit me, or kicked or pushed me.

• 3.7 7. I couldn't get an answer to a question I asked.

3.4 10. People in the hall were bothering the classroom.

3.4 11. Someone made fun of something I said in class.

3.6 13. People in the classroom wouldn't get quiet.

* 4.0 15. I was warned that I might not pass a subject of pass to the next grade.

3.1 17. I or one of my friends was moved to a different class.

3.5 19. Someone shouted or screamed at me.

3.6 20. Someone tried to pressure me to cut class.

3.5 22. I felt unsafe in the school.

• 3.75 23. I could not finish my work in class.

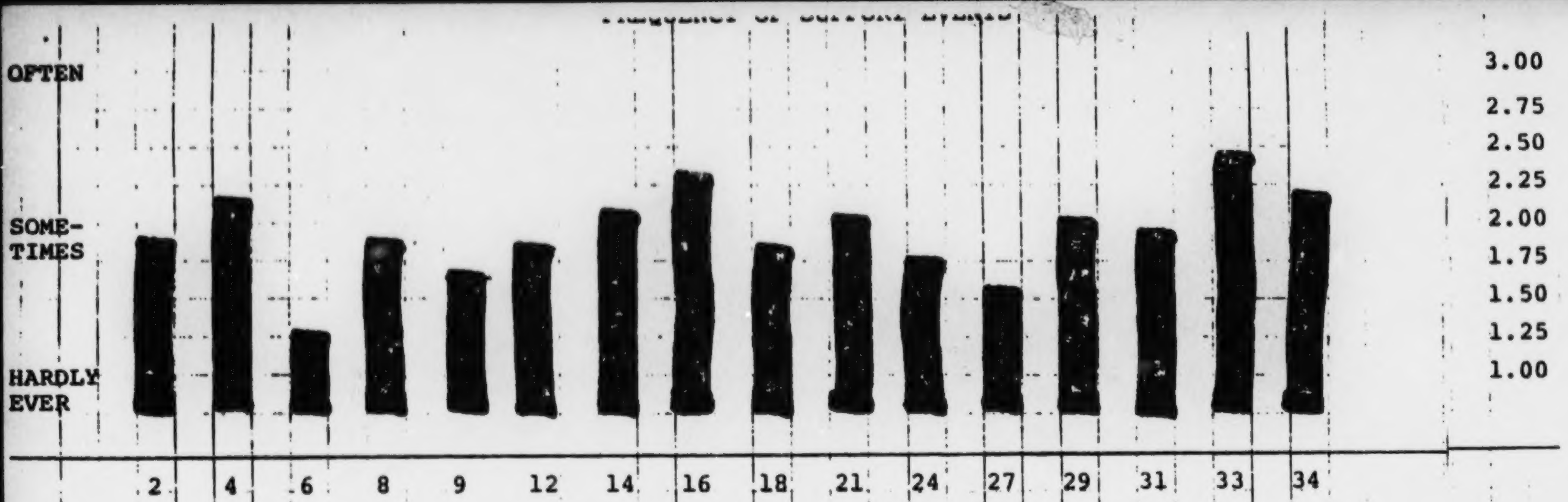
3.5 25. Somebody treated me like I always do wrong.

• 3.8 26. I didn't have a pen or paper or my book to do my work in class.

* 4.1 28. I did worse on a test than I should have.

3.6 30. Someone was picking on me in the hall.

3.0 32. There was a change of teachers in one (or more) of my classes,



Appendix E-2 cont.

* 1.9 2. Someone helped me do something I needed to do.

2.04 4. People paid attention to something I said in class.

2.0 6. People in the classroom spoke respectfully to each other.

2.1 8. I got to be in a class or group with other students I like.

2.0 9. Somebody stuck up for me when I was getting picked on.

2.0 12. Somebody helped me do my homework.

2.0 14. Someone helped me understand something.

* 1.87 16. Someone said I did something right.

2.1 18. Somebody said something to cheer me up.

* 1.9 21. I helped a friend who had a problem.

2.0 24. Somebody helped me make up with a friend.

2.3 27. Somebody helped me think about a personal problem.

2.2 29. Somebody asked me to be his or her friend.

2.1 31. People acted in a way that let me know they understood me.

* 1.67 33. I did well on a test or a homework assignment.

* 1.8 34. Someone gave me a hug or a pat on the back.

APPENDIX E-3

OUTLINE FOR EXERCISE ON STRESS AND RELAXATION

What is stress and how does it affect our bodies?

Words associated with the word stress = string and stretch (in Greek); fight/flight

Primitive man when attacked by fierce animals or other enemies had to decide whether to run away or stay and fight. Like him, when we are frightened or challenged, our bodies respond with what is called the General Adaptation Syndrome (GAS).

GAS	opposite of	RELAXATION RESPONSE
Breathe faster		Breathe slower
Heart beats faster		Heart beats slower
Blood goes to the brain and action centers		
Blood leaves the skin		Blood goes to skin
Digestion slows		Digestion progresses
Muscles tense		Muscles relax

THINK OF THE FOLLOWING SITUATIONS, IN WHICH WOULD G.A.S. APPLY?

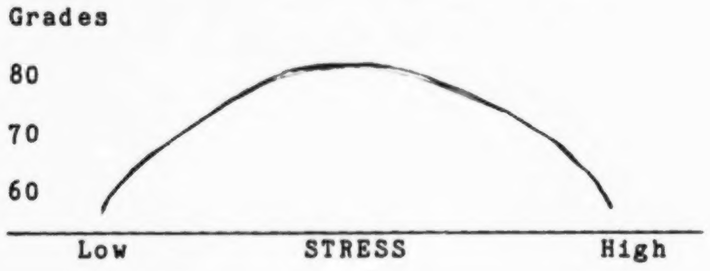
Tests

Emergencies

Relaxation

Competition

STRESS AFFECTS PERFOMANCE; TOO LITTLE AND TOO MUCH ARE NOT GOOD.



CONTINUED STRESS HAS BEEN FOUND TO AFFECT OUR HEALTH, TOO.

Heart attack

Asthma

Colds

Skin problems

Sleep problems

Headaches

Stomachaches

WHAT TO DO WHEN FEEL STRESSED, HEART BEATING, ETC.?

Can use a relaxation exercise

RELAXATION EXERCISE

In this exercise, we are going to tense and relax each part of the body. We will rehearse the movements and then we will do the exercise with our eyes closed.

1. Start with the hands; make a fist (don't squeeze too hard) and then relax your hands
2. Put your hands on your shoulders and tense your arms; then relax
3. Shrug your shoulders up and try to touch your ears with your shoulders; let your shoulders drop
4. Grit your teeth and tense your jaw; then relax
5. Close eyes tight and then relax them
6. Wrinkle your brow and then relax it
7. Take a deep breath and hold it; then let it out
8. Suck in your stomach and then let it out
9. Tighten up your buttocks and then relax back into chair
10. Stretch out lower legs and tighten thighs
11. Raise legs up on toes and tighten lower legs
12. Point toes to ceiling and then lower them to floor

(As the directions were given,the leader who kept repeating "Feel the difference between tension and relaxation")

ARE YOUR HANDS WARM OR COLD WHEN YOU ARE RELAXED?

(Answer: when you are relaxed your blood returns to your skin and your hands are warm).

****

RMEDIATE SCHOOL , M

, Principal

November 14, 1985

Dear Parents/Guardians:

The Parent - Teacher Open School Night is scheduled for November 21, 1985

The administrative staff and the P.T.A. cordially invite you at 6:00 P.M. on that evening to:

A MINI PANEL DISCUSSION that will be held in the auditorium

Topic: Parents as Partners

Panelists

Mr. Tyrone Smith, - State Ed. Dept.
Prof. J. Grannis, - Columbia University
Mrs. Mary Ellen Fahs, - President of Public Education Association

Discussion will be stimulating and informative. We need you to help us make our school a better place for your children.

Following the workshop you will join the Cafeteria Staff for a

BREAKFAST SHOWCASE in the teachers' Cafeteria.

It is extremely important that you attend and be on time. We look forward to greeting you.

Yours in Pursuit of Excellence

, Principal

, P.T.A. Pre.

****

Appendix E-5

PROJECT ON ACADEMIC STRIVING

Notes from Workshop on School Climate conducted by Project on Academic Striving and School Site Management Committee. March 10, 1986.

Mrs. Fahs welcomed all the staff members and thanked them for coming. Professor Grannis then reported on the responses to the Academic Environment Inventory. The stressful events which teachers seemed to feel occurred most often and were also most upsetting were:

1. My students did worse on a test than they should have.
2. I felt unsafe in the school
3. People in the hall were bothering the class.
4. I didn't have the materials I needed.
5. People in the classroom wouldn't get quiet.

He then reported on the events which the students, mostly in the eighth grade, indicated bothered them the most when they filled out the AEI in the fall:

1. I did worse on a test than I should have.
2. I was warned I might not pass a subject or pass to the next grade
3. Someone took something from me.
4. Someone hit me or kicked or pushed me.
5. Somebody treated me like I always do wrong.

Ms. then introduced the main activity of the workshop, the list prepared by the School Site Management Committee for discussion and action. She invited staff to add any items which they felt were missing. One item relating to the unavailability of materials was added. Then each major topic was discussed by groups of staff at separate tables within a format that asked for consideration of procedures, referrals, consequences and follow-up. The following suggestions were reported out by the groups.

STUDENT BEHAVIOR

A. LACK OF INTEREST/MOTIVATION

1. Cutting class: Students take Section Sheet to each subject (Teachers indicate cutting); Notify parents; Deans look at Section Sheets at end of week
2. In hall without pass: 5 minutes after bell, administrators and security do hall sweep
3. Tardiness - notify official teacher, guidance, deans.

B. ATTITUDE: Disrespect, talking back, cursing

1. Conference-- between teacher and student
2. Conference - parent and teacher
3. Referral to Dean and Guidance
4. Follow-up--Conduct cards, follow-up by deans, contact parents often

C. DESTRUCTIVE

1. Throwing food--Give food throwers bag lunch in classroom.
   Have a team study the problem
2. Vandalism--Call parent; finally the police
3. Graffiti--Have students wash off
4. Lack of materials -- open store for pencils etc.
   teachers make checklist at beginning of year

D. SUBSTANCE ABUSE

1. Conference with student
2. Conference with parent
3. Report to medical department
4. Group guidance sessions on harm of drugs, etc.
5. Assembly program
6. Referral to drug coordinator or outside agency
7. Check with school/staff pupil evaluation, refer to Narcotic Division
8. Selling drugs: Notify Police. If anyone sees selling on the street, call 800 number.

E. SAFETY

1. Possession of dangerous weapon: Try to talk to student; take to Principal; call Police & parent.
2. Verbal argument: teacher should be able to control; if not, call Principal and parent.
3. Threatening: see no. 1.
4. Fighting: Send student to Dean; suspend for 3 days; send for parent.
5. Leaving without permission: call parent, send to Dean; suspension.

F. ASSEMBLY

1. Have assembly every week.
2. Homeroom Teacher needs to assess why unprepared; note on report card.
3. Talking and booing: One warning; Exclusion - Detention Room; child write letter of apology.
4. Teachers leaving: up to Administration to discuss in personal conference, letter.
5. Teachers unresponsive: conference between teacher and principal.
6. Bathroom: No passes;if true emergency, someone escort student

G. GOING TO STORE

1. Student should be reprimanded and reminded of reason: safety, no one outside to supervise.
2. Advise Asst. Principal or Principal.
3. Confiscate food; have an anonymous student monitor; contact parents.

CLASSROOM

H. STUDENTS

1. If students late, let them in but keep record.

2. If unprepared; establish a penalty, take off grade. Have a store in school where students can buy materials during homeroom period.
3. Lack of homework, incomplete work, leave room without permission, as well as above, the teacher should be able to resolve without referrals
4. Disruptive, fighting, walking around: Send one to Dean, NOT BOTH. Try to ignore interruptions.
5. Belligerence: Try to ignore; DON'T go to student's level.
6. Discuss these issues at Grade Conferences.

I. TEACHERS

1. Preparation: Lesson plans ahead; appropriate materials; be motivated to motivate kids; try to find interesting materials
2. Lack of instruction: Supervisor conference to give assistance, positive help
3. Inappropriate grades: need workshop on grading policy - by Supervisors or others.
4. Teacher absences: being centrally recorded now; Principal should make a mass (emotional) appeal for staff to support each other
5. Substitute teachers: problem= not prepared. Need materials from Department Head.
6. Coverages: Frustrating - no solutions at moment.
7. Attitude: Teachers don't always address students appropriately; need some different approaches; need to decide on tactics with some students. Teacher workshop on attitudes.

MORALE - STUDENT & STAFF
Causes of poor morale:

1. Lack of understanding of rules
2. Lack of communication--need to know what's going on, in writing, and at staff conferences
3. Frustration of teachers--leads to not caring

Suggestions:

1. Need to develop consequences--developed and implemented by teachers and students jointly.
2. When kids referred, give feedback to teachers, attendance and security on what is happening
3. Teacher ombudsman

Appendix E-6

PROJECT ON ACADEMIC STRIVING

Summary minutes of Final Workshop: June 14, 1986

Joe Grannis described the work of the project over the past four years. The purpose has been to measure student stress and feed back results in order to
1) reduce upsetting events
2) change way people react to events
3) develop support as way of dealing with stress

First year: mainly focused on individual kids but learned that project had to work with groups/classrooms. Then many changes in the school.
Second year: worked with classes/group guidance. Again big changes in the school.
Third year: shifted to working with administration/school structure/school site management as well as with individual students/some classes.

Grannis then distributed the Academic Environment Inventory and discussed the various kinds of items and asked the teachers what their perceptions of the school climate over the years had been. A teacher commented that this past year had been the worst, lost control over everything. Another said that there had been so many program changes that the students didn't know where they belonged, had to keep getting used to new teachers.

Grannis then showed that the AEI indicated that the mean frequency of stressor events had been: 1983--1.86; 1984--1.64; 1985--1.65. He also commented that stress, like beauty, is in the eye of the beholder--some people consistently perceive more stress. He then explained that the AEI had been analyzed to identify clusters of items that students perceived as going together. These clusters could be called: academic troubles, physical and material assaults and general school disruptions. He explained that analyses were done to see what effect these stressor clusters had on students' grades and that mid-year grades were used because they were considered, for a number of reasons, to be the most valid. He then pointed out that academic stressors had a strong negative relationship with grades for both boys and girls and that physical/material assaults also did for boys. (See Tables for June 1986 Workshop: matrix of variables). On the other hand, high perception of school disruptions appears to relate to higher grades, that those students seem more aware/sensitive to these events. Teachers commented that students were perhaps able to block the effect of those events.

Grannis also presented the results of a factor analysis of the Distress measure (Self Report). This yielded three different factors: mood, psychosomatic symptoms, and cold symptoms. It was pointed out that there are strong correlations between the three Distress factors and the three Stressor Frequency factors. Only one Distress factor, cold symptoms, was related (negatively) to grade point average.

Grannis then explained that two out of the three years, the kids most at risk (for bad grades) have seen upsetting things happening a lot but have said it makes no difference.

Mary Ellen Fahs then discussed another aspect of the project's findings regarding students' reactions to stress and their coping. For all three years, the only differences between the boys and the girls on the many variables in the project have been in grades and feelings of upset in response to stress (stressor reaction), both being significantly higher for girls. She explained Grannis' definition of stressor reaction as a kind of valuing or investment that makes negative events in the school upsetting. Strong stressor reaction seems to be very important for boys, e.g. those who say "It makes no difference" getting lower grades. In another assessment of how the students cope with academic failure, similar but somewhat weaker relationships were found for a denying response, saying "It doesn't matter." In a further analysis that divided the students by reading score, it was found that for both boys and girls with higher reading scores, there were strong correlations between high stressor reactions and better grades. For the students with lower reading scores, these relationships do not exist. She posed the question of whether the students who say it makes no difference or doesn't matter, just don't care or whether they are so stressed that saying that is the only way they can survive.

Several teachers commented that the home is an important part of the picture, that many children come to school with many stresses from home. Grannis acknowledged the importance of stresses in home and school. He reported on Rutter's findings that school can multiply the effect of home stress or can help alleviate it. Some teachers commented that some students appear to have so much stress at home that they just want to play and be children at school; that girls seem to cope better, perhaps because they are more mature, have more sense, that boys have to live up to a "macho" image. Grannis commented that boys have a double-edged problem: achieving in school and living up to peer expectations (which include acting out and demonstrating). Another teacher commented that some students may not be answering what they really feel when they say "it makes no difference."

Grannis explained that the project was aware that the adults/teachers in the school were also stressed in many ways and asked the teachers to share the kinds of things that they found stressful. (See attached list which Ms. who had been at the first workshop in 1984 commented that the stressful events were still about the same).

The teachers were then asked to think of things that might help to improve the school's climate for learning, even given the fact that the school structure was going to change again with additional academies. (See attached list). It was generally agreed that the smallness of the sub-schools or academies may make some of the suggestions possible, that it should make more cooperation possible. Mr. commented that absenteeism of teachers was greatly reduced in the academies on the third floor; that teachers appeared to be happier in those settings. Ms. said that it was possible to be hopeful because some of the changes being proposed were being implemented in the B.B. Academy, even though some mistakes had been made.

The final activity of the workshop was a Relaxation Exercise conducted by Russell Gross. Project staff then thanked the teachers for their cooperation and help during the past four years.

Appendix E-6

PROJECT ON ACADEMIC STRIVING

Workshop: June 14, 1986

Present: (names deleted to preserve confidentiality)

PAS staff: Joseph Grannis, Mary Ellen Fahs, Russell Gross

Brainstorming: Changes for Improving Learning Climate for 1986-87

1. Smaller groups/units

2. Effort

3. Need more challenges (special activities) for boys

4. Realize that school structure is related to risk put on students

5. Do things together, e.g. Ms.   's dance program, Gospel Chorus, band

*6. More teachers involved in special activities

*7. Think of meaningful things for students--cooperate around these activities

*8. Cooperation by teachers and mutual support--regardless of top leadership

9. Less inter-comm and bells

10. Homeroom after lunch

11. Establish code of conduct and consistent consequences; teachers handle discipline, too

*12. Fewer program changes

*13. Creative programming

14. Hope springs eternal

* Strategic changes

Appendix E-6

ADULT/TEACHER STRESSES

1. Students coming late
2. Students unprepared - no notebooks
3. Students' attitudes
4. Unenforced code of conduct
5. Unimplemented rules, regulations
6. Inconsistent discipline
7. Unavailability of supervisors
8. Lack of materials
9. Poor utilization of personnel
10. Inequality of staff members' tasks
11. Not a group feeling
12. Lack of leadership
13. Lack of trust, honesty
14. Physical layout - hall and outside traffic; dark room for art
15. Unavailability of security
16. No security plan
17. Traffic patterns in school
18. Unresolved differences between downstairs and third floor
19. Teaching music without instruments
20. Trouble supervising students in hall and classrooms
21. Confusion of messages
22. Teachers not helping each other
23. Don't see the principal - stays in office
24. Lack of professionalism
25. Lack of positive role models for kids
26. Favoritism
27. Too many program changes

6/14/86 Workshop

APPENDIX F

STUDENTS' COPING WITH ACADEMIC AND SOCIAL STRESS IN AN INNER-CITY MIDDLE SCHOOL